

THE RETAIL METHOD OF INVENTORY

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PREFACE

THE purpose of this book is to describe a significant development in retail store management, namely, the retail method of merchandise accounting. This plan of merchandise control is considered with reference to the background of its development, the principles involved, the problems to which it gives rise, the methods of operation, and the results it achieves.

My study of this subject has been based largely on first-hand contact with a considerable number of department stores in connection with the retail operating expense surveys made by the Harvard Bureau of Business Research. This contact has been supplemented by my experience in teaching in the Retail Store Management course in the Harvard Business School where the use of the case method of instruction has brought to light the current operating problems of numerous firms in the retail field.

For useful suggestions and material, I wish to acknowledge my indebtedness particularly to Gordon K. Creighton, general manager of the E. T. Slattery Company, Boston; David E. Moeser, treasurer of Conrad & Company, Incorporated, Boston; Carlos B. Clark, controller of the J. L. Hudson Company, Detroit; and also to Jay Iglauer, secretary-treasurer of the Halle Brothers Company, Cleveland; Ernest Katz, controller of R. H. Macy & Company, Incorporated, New York; Carl N. Schmalz, research director of the Rike-Kumler Company, Dayton; Ralph F. Burkard, treasurer of the John T. Connor Company, Boston; and E. E. Henderson, assistant treasurer of the L. K. Liggett Company, New York. My thanks are due likewise to my colleague in Retail Store Management, Professor Donald K. David, who first directed my attention to the importance of this subject, and to my secretary, Miss Martha Head, who has assisted

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MALCOLM P. McNAIR

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THE RETAIL METHOD OF INVENTORY

I

NEED OF ACCURATE INVENTORY VALUATION

Profit affected by inventory valuation. Depreciation. Sound policy to anticipate losses. Stock shortages. Use of book figures in determining profit. Requirements of a complete system of merchandise accounting. Records must be kept at either cost or retail.

IN mercantile businesses an accurate determination of the profit earned during a period is dependent on a proper valuation of the inventory of merchandise on hand at the end of the period in order to determine correctly the cost of merchandise sold. Following the enactment of income tax legislation, therefore, increasing attention has been focused on methods of inventory valuation. If the inventory of merchandise at the end of a period is valued at too high a figure, the profit is overstated, and taxes may be paid on profit that actually has not been earned. On the other hand, if the inventory is valued at too low a figure, the actual profit is understated, and too small a tax may be paid. The relation of the closing inventory to profit is illustrated briefly by the following condensed profit and loss statement.

Net Sales	\$17,800
Inventory at Beginning of Period.....	\$12,300
Purchases at Net Cost.....	10,500
Freight	250
Net Cost of Merchandise Handled.....	\$23,050
Net Inventory at End of Period.....	11,650
Net Cost of Merchandise Sold.....	11,400
Gross Margin	\$ 6,400
Total Expense	5,500
Net Profit	\$ 900

In this statement, if the inventory at the end of the period were valued at \$12,000 instead of \$11,650, the result would be to decrease the net cost of merchandise sold by \$350, making it \$11,050. Since the gross margin is the difference between net sales and the net cost of merchandise sold, this figure would be increased by \$350, making it \$6,750 instead of \$6,400. In corresponding fashion, the net profit, the difference between gross margin and total expense, would be increased by \$350, making it \$1,250 instead of \$900. The amount of this increase is purely a paper profit if the actual value of the inventory is assumed to be \$11,650. On the other hand, if the closing inventory in the foregoing statement were \$11,300 instead of \$11,650, the net cost of merchandise sold would be increased to \$11,750, the gross margin would be correspondingly decreased, and the net profit would be \$550 instead of \$900. In this instance, therefore, the real net profit is understated if it is assumed that the really correct valuation of the closing inventory is \$11,650.

In addition to the necessity of having accurate inventory valuation figures in order to determine profit, knowledge of the value of goods on hand at any time always is important in enabling a merchant to determine how much and when to buy. These considerations, it is true, would be of merely theoretical importance if it were always easy to arrive quickly at an accurate valuation of the cost of merchandise on hand and the cost of merchandise sold. Such, however, is not the case.

DEPRECIATION

In the first place, a physical inventory taken at the billed cost of the merchandise does not tell the whole story. In 1921, for instance, many merchants who at the close of 1920 inventoried their stocks at billed cost found that the profit which they thought they had made for the previous year was wiped out completely in the rapid decline of whole-

sale price levels. It made no difference what they had paid for the merchandise; in many cases they could not sell it even at the billed cost price, to say nothing of securing a sufficient margin to cover their operating expenses. This element of depreciation in merchandise values, therefore, is one factor that makes inventory valuation a difficult problem.

Nor is the difficulty confined to periods of extreme stress, such as the years 1920 and 1921. Declining price levels are not the sole cause of depreciation in inventory values. Goods may deteriorate physically; they may become shop-worn; styles may and do change with astonishing rapidity; goods may have to be carried over from one season to another; overstocks in some lines may glut the market. In short, any factor that reduces the salability of merchandise lowers the worth of the goods to the merchant, irrespective of what they may have cost him. These considerations apply with special force to department stores, departmentized specialty stores, and other types of retail businesses whose stock in trade consists primarily of seasonal style merchandise, such as women's wearing apparel.

SOUND POLICY TO ANTICIPATE LOSSES

It may be asked why these considerations should affect the question of inventory valuation. The real loss appears not to be sustained until the merchandise actually is sold, whereas the effect of registering depreciation at inventory time is to decrease the amount of profit shown for the period just closing, since a lowering of the inventory valuation correspondingly increases the cost of merchandise sold and thus decreases the gross margin. The answer is that accounting, from a practical standpoint at least, is not an exact science, but rather is, or should be, a tool to be used in securing and maintaining control over business operations. From this standpoint, the prudent conduct of a business, with the proper exercise of foresight, requires that losses

be anticipated whenever they are seen to be inevitable or even strongly probable. It further may be argued that such losses as are shown by inventory depreciation actually are incurred in the purchase of the merchandise in question rather than in its sale, and hence are a proper charge against the profits of the current period. Whatever the reason may be, however, the recognized sound practical policy is to value goods in an inventory at their actual worth, usually as indicated by current wholesale market prices whenever such figures are lower than actual cost.

If it is sound policy to anticipate losses, why not anticipate profits also? This is a rule, however, that does not work both ways, although occasions are not infrequent when the current wholesale market value of goods in an inventory is higher than the original cost price. The prudent business man, nevertheless, counts only the bird in his hand and disregards those in the bush. Conservative practice demands that losses should be anticipated; conversely, it requires that profits should not be anticipated. The safe rule is "cost or market whichever is lower."

STOCK SHORTAGES

Another reason why a physical inventory of merchandise at billed cost does not tell the whole story is that such an inventory represents simply a count of the merchandise on hand and does not reveal to what extent goods may have been lost through theft or otherwise. In the example previously given, this element of stock shortage, as well as the element of depreciation, was "absorbed by neglect," so to speak. The inventory at the end of the period was assumed to be the net valuation; in other words, by this procedure, the depreciation and the stock shortages, if any, both were included automatically in the net cost of merchandise sold. When the gross inventory is taken at billed cost and subsequently depreciated to market value, the amount of depreciation, of course, may be recorded;

and such records are valuable for future guidance. Under this plan, however, there is no means of knowing the actual amount of stock shortage. The cost of merchandise sold is determined by means of the net inventory of goods actually found on hand at the end of the period. The element of stock shortage may be entirely absent; it may be relatively small; or it may be large. From the standpoint of control, the amount of stock shortages should be known; otherwise, here is a leak that may develop unsuspected proportions. There is no way, however, by which the amount of stock shortages may be learned unless there exist, entirely independent of the physical inventory, some other means of determining the amount of merchandise on hand and the cost of merchandise sold. If merchandise records are operated in such a way as to provide a book figure for the amount of merchandise that should be on hand, this figure can be checked at inventory time with the amount of merchandise actually discovered in stock, and any discrepancy will be a stock shortage, or overage, as the case may be.

USE OF BOOK FIGURES IN DETERMINING PROFIT

There are even more important reasons, however, for the maintenance of merchandise records in such a way as to make book figures readily available to show the value of merchandise on hand and the cost of merchandise sold. As previously pointed out, profit cannot be determined in a mercantile business without taking into consideration the value of the merchandise in stock. Many merchants take a general physical inventory not more than twice a year; some not more than once a year. Yet, to control their businesses adequately, they should have some means of knowing at considerably more frequent intervals whether or not the planned rate of profit is being maintained. It cannot be expected that a merchant will resort to a general physical inventory, with all the labor and confusion which that entails, every time he wishes to ascertain the status

of his profit and loss account. Under modern competitive conditions, however, a frequent check-up on the profit and loss account is essential to successful merchandising. Such a check-up, without recourse to a physical inventory, may be had if book figures are available to show the value of merchandise on hand and the cost of merchandise sold.

Knowledge of the amount of merchandise on hand also is particularly useful in enabling a merchant to determine how much money to invest in additional purchases; yet it cannot be expected that a merchant will undertake a physical inventory of his stock every time a salesman calls or a buyer goes to market. Again the desirability is evident of maintaining a system of merchandise records in such a way as to show at any time book figures for the value of the merchandise on hand and the cost of merchandise sold. Furthermore, the contingency, no matter how remote, of loss by fire is one that the business man always must bear in mind; and, when it comes to securing settlements from insurance companies, accurate book figures for the value of merchandise on hand at the time of the fire are greatly to be preferred to mere guesswork.

REQUIREMENTS OF A COMPLETE SYSTEM OF MERCHANDISE ACCOUNTING

It is evident, therefore, that the large modern mercantile business needs to maintain a complete system of merchandise accounting. To be successful such a system must fulfil certain fundamental requirements.

1. It must provide means of securing accurate inventory figures at cost or market whichever is lower. Two corollaries of this requirement are that a satisfactory method of merchandise accounting must facilitate the taking of depreciation, especially during periods of rapidly declining prices, and that, for the purpose of determining taxable income, it must provide

an inventory figure that is satisfactory both to the business firm and to the government tax authorities.

2. The method, furthermore, must not be too complicated or require too much work. Like other accounting and statistical records, a plan of merchandise accounting and control must not cost more than it is worth; the results must amply justify the expenditure. At the same time, the system must be as nearly proof against error as possible.

3. Finally, a complete system of merchandise accounting should provide at all times accurate book figures for the value of merchandise on hand at any date and the value of merchandise sold during any period.

This last requirement is at once the most essential and also the most difficult. It demands, in effect, the maintenance of dollars-and-cents merchandise records on a perpetual inventory basis; and, in mercantile businesses, the use of such records is complicated by the fact that goods are bought at one price and sold at another. A merchant, for example, buys 500 house dresses at cost prices ranging from \$1.40 to \$3, and places these goods on sale at retail prices ranging from \$2 to \$4.50. Within a brief period sales at retail have amounted to \$750. Without resorting to a physical inventory, how can the merchant learn the cost value of the house dresses still remaining in stock and the cost of the house dresses that have been sold? He knows the total cost value of the stock of house dresses on hand at the beginning of the period; he knows the total cost of purchases of house dresses during the period; and he likewise knows the total sales of house dresses at retail during the period. Yet he cannot combine these particular figures in any way that will show accurately the value of the stock still on hand and the cost of the stock which has been sold, since some of the figures are at cost and do not

include the mark-up, whereas the other figures are at retail and do include the mark-up. As usual in such cases, also, the mark-up percentages are not in all instances the same. The situation is further complicated if any mark-downs have been taken, as may very likely be the case. Such mark-downs would reflect decreased salability and hence a lower value of the merchandise to the business.

RECORDS MUST BE KEPT AT EITHER COST OR RETAIL

In the foregoing case it is evident that there are two general alternatives: either (1) all merchandise records may be maintained on a cost basis, or (2) all merchandise records may be maintained on a retail basis.

If the first of these plans is adopted, it will be necessary to keep a record of sales on a cost basis. In other words, the cost of each item of merchandise sold will have to be recorded at the time of sale, or immediately subsequent to the sale. Then the cost of merchandise on hand at the beginning of the period, plus the cost of purchases during the period, minus the cost of merchandise sold, results in a figure for the cost of merchandise remaining on hand.

If this plan is not considered desirable, the obvious alternative is to record all figures on a retail basis; and this means that inventories and purchases will have to be recorded at retail selling prices as well as at cost. Then, inventory at the beginning of the period at retail, plus purchases at retail, minus sales and mark-downs at retail, results in a figure representing the retail value of merchandise on hand. Thus, a perpetual inventory is maintained at retail rather than at cost. This is essentially what the retail method of inventory accomplishes.

In order to arrive at the amount of profit or loss for the period, however, it is necessary to have a figure for the cost valuation of the goods on hand; profit or loss cannot be determined from the retail figures alone. Merchandise inventory at the selling-price figure, therefore, must be re-

duced to a cost or market valuation; and this is done by deducting the amount of mark-up that has been applied. The determination of the amount of mark-up that has been applied requires that records be kept of inventories and purchases both at cost prices and at selling prices. Hence, the retail method of inventory is in effect a selling-price method of merchandise accounting.

Although the designation "retail method of inventory" is to some extent misleading, both because it is more than a mere method of inventory and also because it is applicable to other than retail businesses, in the following pages, for convenience, it will be termed simply "the retail method."

II

DEVELOPMENT OF THE RETAIL METHOD OF INVENTORY—RELATION TO TAX PROBLEMS

Illustration of retail method. Origin of retail method. Planning on a retail basis in department stores. Use of retail figures for control purposes in chain stores. Position of retail method with respect to income tax regulations. Later rulings by Treasury Department. How to meet federal tax requirements under the retail method. Extent of present use of the retail method.

For the sake of a simple illustration of the principle of the retail method, suppose that in a men's furnishings department the value of stock on hand at the beginning of the season is \$3,000 at cost and \$4,000 at retail. Subsequent purchases total \$6,000 at cost, and these lots of merchandise are priced at \$8,500 at retail. During the season, sales at retail amount to \$7,475; hence the retail value of the stock on hand at the end of the season, according to the perpetual inventory, is \$5,025 (since $\$4,000 + \$8,500 - \$7,475 = \$5,025$). In order to verify this figure, the actual inventory is taken at selling prices, and goods worth \$5,000 at retail are found in stock, a retail stock shortage of \$25 thus being discovered. Then, to determine the cost value of the inventory, the percentages of cost and mark-up must be known. The total cost of merchandise handled, including the beginning inventory and purchases, is \$9,000 (that is, $\$3,000 + \$6,000$), and the total retail price figure placed on goods in stock at the beginning and on purchases made subsequently is \$12,500 (that is, $\$4,000 + \$8,500$). Thus the total mark-up in dollars is \$3,500 (that is, $\$12,500 - \$9,000$), or 28%. The percentage representing the cost of the merchandise, of course, is the complement of 28%, or 72%. The cost value of the closing

inventory, therefore, is 72% of \$5,000, or \$3,600; and the cost of merchandise sold is \$5,400 (that is, \$9,000—\$3,600). Hence the gross margin in this case is \$2,075, the difference between the net sales, \$7,475, and the cost of merchandise sold, \$5,400.

ORIGIN OF RETAIL METHOD

The records of several department stores show that the retail method in one form or another has been in use in some instances for a period of 20 years or more. It does not appear that this method originated in any one store and spread from there to other stores; but rather that the development took place independently in different localities, since it is a natural short-cut that readily might occur to any one engaged in merchandise accounting work. It is nevertheless true that the retail method is in large measure a logical culmination of certain tendencies that have developed in retail store management during the period since about 1900.

In the first place, there has been a growing tendency in all fields of retailing to put the emphasis on the selling-price figures rather than on the cost figures. For example, within recent years it has become the fairly general practice to compute percentages of expense and profit on the basis of net sales as 100% rather than on the cost of merchandise as 100%, although many business arithmetic text-books still cling to the old practice of figuring profit as a percentage of the cost of the merchandise. It is not difficult to understand why originally the cost figure appealed to many firms as the logical basis for computing profits. With his money invested in merchandise, the cost price of the goods naturally bulked large in the merchant's mind. He tended, furthermore, to think of profit in terms of return on his investment, and his purchases of merchandise represented a considerable part of his investment. Furthermore, when the gross profit, or gross margin, was reckoned as

a percentage of the cost of merchandise, the desired percentage of mark-up could be applied directly to the cost figures with a minimum possibility of confusion or mistake. Although this reasoning seemed to apply admirably in computing the percentages of gross and net profit, it did not work so well in actual practice when applied to expense percentages. The merchant might argue that the expense was incurred in order to sell the goods, and, therefore, properly might be computed as a percentage of the cost of the goods; but in the course of actual store routine, wages of sales force, advertising, rent, and other expenses really were paid out of the receipts from the sales of merchandise. Hence it was natural to think of these expenses as a percentage of the sales rather than as a percentage of the cost of the goods. The habit of regarding gross profit as a percentage of the cost and at the same time reckoning expense as a percentage of sales was an open door to possibilities of confusion and error in pricing merchandise. A careless retailer, for example, estimating his expense at 25% of his sales, and adding thereto 5% to provide for a net profit, might forget that the figure of 30% thus arrived at could not be applied directly to the cost of merchandise in order to arrive at the retail price, but first had to be shifted to the equivalent percentage on cost, because of the difference between the sales and cost bases.¹ In view of these possibilities it obviously was desirable to keep all percentages of expense and profit on the same basis, and from a practical standpoint the sales basis has come to be regarded as the more logical one to use.

In accounting for the greater emphasis on the retail as opposed to the cost value of merchandise, however, there

¹Thirty per cent on sales is equivalent to approximately 43% on cost. If a merchant marked up his goods only 30% on cost he would realize a gross margin of only about 23% on sales, and, consequently, would incur a net loss if his expenses were 25% of sales. The relation between percentages on sales and percentages on cost may be expressed by the following formula:

$$\frac{\text{Percentage on Sales}}{(100 - \text{Percentage of Gross Margin on Sales})} = \text{Percentage on Cost}$$

are other reasons that are more fundamental than the matter of convenience in handling percentages. The ordinary retail practice has been for the merchant or buyer to go to market or receive calls from traveling salesmen at more or less regular intervals. Seeing the display of samples, or the finished goods, the merchant placed orders for such merchandise as happened to appeal to his fancy or appeared to him to be a good bargain. The quantity that he purchased frequently was dictated more by the terms offered and by the merchant's financial resources, than by any definite sales plans. Later, when the merchandise was shipped to the store, the merchant or buyer placed retail prices on it in accordance with what he thought he could get for it. Then, in numerous instances he found that sales did not come fully up to expectations. Perhaps the style or quality was not that demanded by his clientele; perhaps he had bought more than he could reasonably expect to sell; or perhaps the mark-up that was necessary to cover his cost of doing business made the retail price too high to be attractive to his customers. Although the bulk of the retail business of the United States still is conducted by these haphazard methods of merchandising, farsighted retailers, especially in the department-store field, for a number of years past have recognized the futility of these methods and have been developing the science of modern merchandising. In this development one of the cornerstones is the planning of sales and purchases on the retail basis. The modern merchant realizes that once he has goods in stock it makes little difference what he has paid for them; the thing that really counts is what he can get for them. Especially following his experience in 1920 and 1921, he no longer prides himself on large inventories and ample stocks. A large stock of goods in a period of declining prices may be more of a liability than an asset. It makes no difference then what the cost of the merchandise was; the profit or loss is determined principally by what the public will pay for the goods.

PLANNING ON A RETAIL BASIS IN DEPARTMENT STORES

In a sense, therefore, modern merchandising methods practically reverse the procedure that was and still is customary in many stores. It is commonly said that the up-to-date merchandise manager in a department store sells goods before he buys them. This means simply that instead of buying merchandise and then determining what it should be sold for, the merchandise manager and the buyers plan the sales in advance and then determine what merchandise to buy in order to meet those sales. Not merely is this a process of planning how many units of a given article are to be sold, but in many stores sales planning now involves determining in advance the retail prices at which goods are to be sold. Records of previous seasons are consulted in order to discover the best selling prices, and then for the coming season it is planned definitely to sell a certain number of units at each of those prices. Armed with this detailed knowledge of the sales which have been planned, a buyer can go to market knowing exactly what goods to purchase, what quantities are required, and at what prices he must buy in order to attain the planned rate of gross margin for his department.

Thus, throughout the process of sales planning in a typical modern department store the principal emphasis is on the sales aspect of the situation. Not only are sales planned at retail, but the stocks necessary to meet those sales likewise are planned at retail. Even the purchases in the first instance may be planned at retail figures. It is by no means uncommon for a buyer to place the planned retail price of the merchandise on his copy of the order, rather than to wait until the invoice has arrived before he designates the retail price at which the goods are to be marked. When the planning of sales, stocks, and purchases all is done on a retail basis, it is natural that records of actual stocks and purchases should be kept at retail figures for checking purposes. Thus the whole development of modern

merchandising methods in department stores to a large extent has been based on the use of retail figures rather than cost figures; and when records of stocks and purchases, as well as of sales, are being maintained in retail figures for purposes of merchandise control, it is but a short step to the device of reducing the retail inventory figure to a cost valuation on the basis of the average percentage of mark-up.

USE OF RETAIL FIGURES FOR CONTROL PURPOSES IN CHAIN STORES

Even before these developments in department-store sales planning began to attract attention, a somewhat similar shift of emphasis from the cost to the retail figures took place in a number of chain-store organizations handling convenience goods. Here, again, the reasons for this development, though not the same as in the case of department stores, were connected with the problems of merchandise control. By the very nature of its business, transacted as it is through numerous scattered retail units, and dependent for its success, in large part, on rapidity of turnover, a chain-store organization is forced to give particular attention to control problems. It cannot afford to rely too much on the judgment of individual store managers. Ordinarily, the store managers cannot be allowed discretion in matters of mark-up and pricing; hence it has become a fairly general practice for chain-store organizations to bill merchandise from central warehouses to branch stores at retail rather than at cost prices. Thus a store manager is at all times charged with a certain amount of merchandise at retail for which he must account in cash and in the merchandise itself at inventory time. No loophole is left. The stock at retail at the beginning of the period, plus shipments from the warehouse at retail, minus sales or transfers to other stores at retail, plus or minus authorized price changes, must equal the stock on hand at retail at any time that inventory

is taken, provided the store has been managed properly. Therefore, for the purpose of controlling inventories and securing a check on store managers, the taking of inventory at retail figures is the customary procedure in chain-store businesses.

The background of the retail method of merchandise accounting is therefore clear. It is a natural step in the development of modern systems of merchandise control. Growing up sporadically as it did, however, the use of the complete retail plan of inventory naturally was accompanied by little uniformity in practice. This was especially true as regards the determination of the cost and mark-up percentages. In different stores procedure varied as to the treatment of additional mark-ups and mark-downs and as to the effect these price changes were allowed to have on the cost and mark-up percentages.

POSITION OF RETAIL METHOD WITH RESPECT TO INCOME TAX REGULATIONS

There was no occasion, however, to seek any standardization of method prior to the enactment of legislation providing for income and excess profits taxes. In fact, outside of the few stores using the retail method, the possibilities of this plan received little or no general attention until the Federal Government began to tax income and excess profits. As soon as it was undertaken to collect taxes of this kind, however, all inventory problems immediately came into the limelight. In the words of the regulations published by the Treasury Department, "In order to reflect the net income correctly, inventories at the beginning and end of each year are necessary in every case in which production, purchase, or sale of merchandise is an income-producing factor."¹ The interest of the Federal Government in methods of inventory is easy to understand, since if an inventory of

¹Article 1581, page 316: Regulations 62, Treasury Department, United States Internal Revenue, 1922 edition.

merchandise is undervalued the taxable income of the business is correspondingly reduced.

At first, when some department-store firms that had been operating on the retail method of inventory valuation made their income tax returns on that basis, the federal tax authorities refused to accept them. It was required that inventories be taken either at (1) cost, or (2) cost or market whichever was lower; and a cost valuation arrived at by the retail method was not considered satisfactory as a basis for determining taxable income. In taking this stand, the Treasury Department officials were evidently apprehensive lest the use of the retail method should lead unscrupulous merchants to lower their inventory valuations by means of more or less fictitious mark-downs. Although the taking of inventory strictly on a cost basis proved reasonably satisfactory during the period of rising prices when market valuations at inventory time in numerous instances were higher than cost, this situation changed abruptly in the middle of 1920; and it became desirable to use the basis of cost or market whichever was lower. At the same time, however, the difficulty of using this basis was increased by the Treasury Department's prohibition of the practice of deducting from inventory a reserve for price changes or an estimated percentage for depreciation. It was no longer permissible to take inventory at cost and then reduce the valuation approximately to a market basis by writing off 10% or 15% for depreciation; instead, it became necessary to determine by actual appraisal the market value of each item.

In the meantime, however, department-store firms interested in retaining the retail method for internal control purposes were bringing their cases to the attention of the Treasury Department. Trade associations, particularly the National Retail Dry Goods Association and the Controllers' Congress, made special efforts to secure permission for retail merchants to use the retail method in making tax returns. Largely as a result of these efforts, there was issued on

August 16, 1920, Treasury Decision 3058, which amended the existing income tax regulations by inserting an article permitting retail dry-goods merchants to make their returns on the basis of the retail method of inventory. The permission thus accorded, however, was not in all respects satisfactory. It designated the retail method as essentially a cost method of valuing inventories, and provided that mark-downs were not to be included in the computation of the retail value of the goods on hand unless the goods so marked down actually had been sold. This latter feature of the ruling made it practically impossible to reduce a retail inventory figure to a true market valuation when the market value was lower than the cost. Coming as it did in August, 1920, therefore, when a period of declining prices was seen to be imminent, this Treasury Decision was far from satisfactory to department-store firms that wished to make their income tax returns on the basis of the retail method.

LATER RULINGS BY TREASURY DEPARTMENT

In January, 1921, however, the Commissioner of Internal Revenue, in a letter to the National Retail Dry Goods Association, clarified considerably the position of the Treasury Department with respect to the retail method. Two significant paragraphs from this letter are as follows:

The designation of the method as a "cost" method. It was not intended that the apparent limitation should be inflexible. It is recognized that on a constant or rising market the retail method is approximately a "cost" basis and that on a falling market it results in a reduction to "cost or market, whichever is lower."

Proper mark-downs substantiated by record of facts will be permitted. The decision is not intended to disturb the procedure in stores which have properly handled mark-downs, but instances where arbitrary reductions from retail values have been made because of the desire to provide for depreciation and obsolescence with no actual offering to the public of the goods on which the mark-downs were claimed, cannot be recognized. Under no circumstances will a store be allowed to depreciate its stock in any

way except by the offering of it to its customers at such reduced prices. The procedure of stores in regard to mark-downs will be deemed proper if in any fiscal year or period of that year the goods so marked down are in proportion to current sales, to stock on hand, to mark-downs of preceding months of preceding year, or if evidence can be submitted as to market changes which have forced a reduction in retail prices necessary to bring about a parity with the selling price of the same goods which have been purchased or could be purchased at a reduced cost.¹

Later, in Treasury Decision 3296, approved March 3, 1922, the privilege of using the retail method of inventory to determine taxable income was extended to retailers other than retail dry-goods merchants, provided the accounting records prescribed for the use of that method were maintained by the retailer for the tax period affected.² Finally, Income Tax Mimeograph 3077, approved March 23, 1923, summarized the position of the Treasury Department on the retail method, and added to previous rulings the important provision that where a fictitious book profit was shown by a retail store at the time when it changed from the cost method of computing inventories to the retail method, such book profit need not be included in taxable income.³ This guaranty that unrealized book profits shown as a result of the change from the cost to the retail basis would not be taxed removed for many department stores the final obstacle to the adoption of the retail method. In the early part of 1924, the procedure for retail dry-goods merchants wishing to change from the cost to the retail basis of merchandise accounting was further facilitated by Income Tax Mimeograph 3180, which stated that the change might be made without obtaining formal permission from the Treasury Department, provided the books of account for each tax period affected were kept by such dealers on the basis

¹David, D. K., *Retail Store Management Problems*, pp. 72-73. A. W. Shaw Company, Chicago, 1922.

²Treasury Decision 3296 is given in full on pages 129 to 135, in the Appendix.

³Income Tax Mimeograph 3077 is given in full on pages 135 to 137, in the Appendix.

of the retail method as prescribed.¹ Later, this privilege was extended to other types of retail merchants.

HOW TO MEET FEDERAL TAX REQUIREMENTS UNDER THE RETAIL METHOD

On the assumption, then, that a retail merchant wishes to change from the cost to the retail plan of inventory valuation and to use the latter plan as the basis for reporting his taxable income, what must he do in order to conform to the requirements of the Treasury Department? A review of the various Treasury Decisions indicates the general requirements that must be met.

1. The merchant must adhere consistently to the retail method. When the change is made from the cost to the retail method, the latter must be followed throughout the full accounting period for which the return is made. It is not permissible to take inventory on the cost or cost-or-market basis at the beginning of the period for which the tax return is being made, and then to value inventory according to the retail plan at the end of the period.

2. The fact that the retail method is used must be designated on the tax return.

3. Accurate records must be kept in permanent form for inspection by Internal Revenue officers. These records, which are to be kept separately by departments or classes of merchandise, must include inventories at cost and retail, sales, mark-downs, and purchase records showing the names of firms, dates of invoices, invoice costs, and retail selling prices.

4. The total retail value of the goods in stock at inventory time is to be reduced approximately to cost

¹Income Tax Mimeograph 3180 is given in full on page 138, in the Appendix.

value by deducting the percentage which represents the difference between the total retail selling value and the total purchase price. This total mark-up is not to be an arbitrary standard percentage, but must be the actual mark-up percentage computed as accurately as possible from the departmental records for the accounting period for which the return is made.

5. Any increase in the original retail price of merchandise made subsequent to the time when the goods first were marked should be recorded on a special form, referring to the original invoice, and providing complete information as to the reasons for the increase. It is expected that such reasons customarily will be either an advance in replacement costs or incorrect pricing at the time of original marking. The same forms that are used to record such price increases are not to be used to record mark-downs, and no increase in retail price may be included which is in the nature of a correction or a cancelation of a mark-down. For example, if a garment is priced originally at \$15, a reduction taken to \$13.50, and later the retail price advanced to \$14.50, the increase of \$1 is not to be included as a part of the total retail value of the merchandise in stock; but rather the net result, so far as this item of merchandise is concerned, is a mark-down of 50 cents.

6. Mark-downs will be recognized only when the goods that are to be marked down are offered to the public at bona fide selling prices. The test of bona fide selling prices is to be the actual offering of the merchandise for sale during a reasonable period of time.

It is not to be understood that the Internal Revenue officials insist on a rigid and literal interpretation in every instance of all the regulations affecting the use of the retail method. If the retail plan is operated with a proper under-

standing of the principles involved, and is adhered to consistently, a retailer incurs no greater likelihood of having his tax returns questioned under this method than when he is valuing his inventory according to either the cost or the cost-or-market plans.

EXTENT OF PRESENT USE OF THE RETAIL METHOD

Up to 1924 at least, the use of the retail method was confined principally to department stores and metropolitan specialty stores with a departmental form of merchandise organization. Even among these groups, however, the use of the retail method could not be termed general. An approximate indication of the extent to which this plan of inventory valuation was in use in 1923 is afforded by the results of the Harvard Bureau's study of operating expenses in department stores in that year. Of 403 firms with sales below \$1,000,000, in 1923, only 106 stated that they were using the retail method of inventory; but of 163 firms with sales over \$1,000,000, in the same year, 118 reported that they were using the retail method; and 30 out of 41 metropolitan specialty store firms reporting in the same year stated that they were using the retail method.¹ If these figures may be taken as representative, they indicate that the retail method is much more widely employed among stores with sales over \$1,000,000 than among those with sales less than \$1,000,000. The reason perhaps lies in the fact that in the dry-goods and garment trades a retail store with sales of over \$1,000,000 annually is likely to have a fairly well departmentized form of organization. At least, it is departmentized to the extent that merchandise figures such as sales, purchases, and stocks are recorded separately by departments, or by merchandise divisions. On the other hand, many retail dry-goods stores with annual sales less than \$1,000,000 are not fully departmentized.

Among chain-store organizations selling convenience goods

¹Bureau of Business Research, Harvard University, *Bulletin Number 44*, "Operating Expenses in Department Stores in 1923," pp. 16, 56, and 100.

such as groceries and drugs, it is the general practice to charge all merchandise to the retail stores at the selling prices and to take the physical inventories at selling prices. In many instances, however, this does not mean that the full retail method of inventory valuation is used. The complete retail method involves reducing the retail inventory figure to an approximate cost valuation by deducting an amount proportionate to the difference between the total retail selling value of the merchandise handled and the total purchase price. In a number of chain-store organizations at least one inventory annually, for the purpose of closing the books in order to determine profit accurately, is taken both at retail prices and by the physical quantities of each article of merchandise in stock. The inventory sheets from each retail store and from the warehouse then go to the central office, where the cost price of each article is entered on the sheets, and the amounts extended. During the year the central office keeps a record of all changes in the market prices of commodities dealt in; and where such market prices are lower than cost at inventory time, the market price figures are entered and extended on the inventory sheets. Thus a total inventory figure is secured at cost or market whichever is lower. Although much clerical work is entailed, this plan involves some of the advantages of both the cost and retail methods. The fact that in some chain stores, particularly those in the grocery field, sales are not recorded by merchandise departments, but merely by stores, perhaps is a reason for the use of the combined cost and retail method rather than the complete retail plan.

During 1923 and 1924 a few retail shoe stores and men's clothing stores were experimenting with the retail inventory method, but in a vast majority of unit stores no attention has been paid to its possibilities. There is probably no immediate likelihood that general use of the retail plan will be made in small unit stores of the neighborhood type. The proprietors of such retail businesses in numerous instances are not keeping records that are adequate to show

accurately their costs of doing business; and, although they might derive some advantages from the use of the retail plan of inventory valuation, it is not to be expected that many of them will undertake to keep the additional records, particularly those of mark-downs and other price changes, that are essential to the operation of this plan.

Although, as the name indicates, the use of the retail inventory plan thus far has been confined to retail business, the method, in principle at least, is also applicable to wholesale trade. So far as can be ascertained, however, little attempt has been made in any field of wholesale business to develop a systematic plan of keeping merchandise records on a selling-price basis. Of course, the situation in a typical wholesale firm presents many points of difference from the situation confronting a retailer. Wholesale prices, for instance, frequently are subject to variation by salesmen; whereas haggling over prices is practically a thing of the past in present-day retail business, except for a few stores situated in such localities as the East Side in New York City. It is obvious that a selling-price plan of merchandise accounting could be operated only with difficulty under a system of varying prices. There are indications, nevertheless, that the fixed-price idea is making headway in some divisions of wholesale trade; and it is not impossible that when wholesalers begin to recognize more generally the desirability of budgeting sales and expenses they may find it useful to plan, as do many department stores, in terms of selling prices rather than cost prices. In such an event, a selling-price method of merchandise accounting quite conceivably may come into use in wholesale trades.

III

PRINCIPLES—EFFECT OF PRICE CHANGES

Prices may be changed subsequent to the original marking of the goods. Complete statement of the formula for computing inventory by the retail method. Relation of price changes to the cost percentage. Simple example. Case of additional mark-ups. Case where additional mark-ups are not permitted to affect the cost percentage. Additional mark-ups should be included in computation of cost percentage. Case of mark-downs. Case where mark-downs are permitted to affect the cost percentage. Mark-downs should not be included in computation of cost percentage. Determining gross margin. Additional mark-up cancellation. Mark-down cancellation.

IN the illustration of the retail method at the beginning of the preceding chapter, a manifestly simple situation was outlined with no attention to any possible complicating factors. No account was taken, for instance, of any changes made in retail prices after the original marking of the goods. In actual practice, of course, there nearly always are mark-downs or retail price reductions during the course of a season; and not infrequently there may be cases of additional, or secondary mark-up. For example, a specific lot of hosiery may have been placed on sale at a retail price of \$1.75 a pair; and after a few weeks a rise in the wholesale price of this same hosiery may make it advisable to advance the retail price to \$1.95 a pair, in accordance with the recognized principle of retail store management that retail prices ordinarily should be based on replacement costs.

The possibilities of retail price changes, furthermore, are not confined to simple mark-downs and additional mark-ups. Some mark-downs, for instance, may be taken on merchandise the price of which at an earlier period had been advanced beyond the original retail figure. A suit originally priced at \$35 may have been advanced in price

to \$39.50 because of a corresponding rise in the wholesale price. Later in the season, during a clearance sale, the retail price of this same suit may be reduced to \$29.50 in order to clean out the stock preparatory to the opening of a new season. Again, when not all the merchandise reduced in price for a special sales event has been sold, the original prices sometimes are restored on the remaining articles. House dresses regularly marked to sell at \$3.95 may be reduced to \$2.95 for a special one-day sale in that department; and at the close of the sale such of these garments as still remain in stock may be advanced again to the original price of \$3.95.

COMPLETE STATEMENT OF THE FORMULA FOR COMPUTING INVENTORY BY THE RETAIL METHOD

All these possibilities of price change demand a more complete statement of the formula for computing inventory by the retail method. Such a statement follows: For each department, or for each classification of merchandise, inventory at the beginning of a period is entered at both cost and retail figures; and all purchases during the period likewise are entered at both cost and retail figures. To the total retail figure is added the sum of additional mark-ups, less additional mark-up cancelations. Thus there are available total cost figures and total retail figures for all merchandise handled during the period. The difference between the total cost and total retail figures is the amount of mark-up. This is computed as a percentage of the total retail figure; and the complement of this percentage, that is, the difference between this percentage and 100%, is the percentage which represents the cost of the merchandise. From the total retail figure are subtracted net sales for the period plus mark-downs less mark-down cancelations. The remainder is a book figure for the retail value of the merchandise that should be on hand. Then the actual physical inventory is taken at the retail figures appearing

on the tickets on the merchandise in stock; and any discrepancy between the retail book inventory and the actual physical inventory is a retail stock shortage, or overage, as the case may be. To the actual retail inventory figure is applied the complement of the percentage of mark-up in order to ascertain the cost-or-market valuation of the closing inventory.

TABLE I
FORM FOR COMPUTING INVENTORY ACCORDING TO THE
RETAIL METHOD

Merchandise	1 Cost	2 Retail	3 Mark-up	4 Percentage of Mark-up
1. Opening Inventory (lines 9 and 10 of preceding period) . . . . .	..	..	..	..
2. Purchases . . . . .	..	..	..	..
3. Freight, Express, and Cartage—Inward . . . . .	..	000	000	000
4. Additional Mark-up, Less Additional Mark-up Cancellations	000	.	..	000
5. Total Inventory, Plus Additions . . . . .	.		..	..
6. Net Sales	000	..	000	000
7. Mark-downs, Less Mark-down Cancellations	000	.	000	000
8. Total Retail Deduction (sum of items 6 and 7)	000		000	000
9. Resultant Retail Inventory (retail inventory on line 5, column 2, minus item 8)	000	.	000	000
10. Calculation of Cost Percentage: (a) Total Percentage . . . 100%				
(b) Percentage of Mark-up (line 5, column 4)%				
(c) Percentage of Cost [(a) minus (b)]%				
11. Cost Inventory (item 10 (c) applied to item 9) . . . . .	..	000	000	000
12. Resultant Mark-up and Percentage (item 9, minus item 11)	000	000	..	
13. Gross Cost of Merchandise Sold (difference between Cost Inventories on lines 5 and 11) . . . . .	..	000	000	000

The foregoing description of the retail method is in accordance with the form for computing inventory according to the retail method, shown on page 29, which has been recommended by the Controllers' Congress of the National Retail Dry Goods Association.¹

RELATION OF PRICE CHANGES TO THE COST PERCENTAGE

There are several questions of merchandising and accounting principle involved in the use of the retail method, and the most important of these center on the calculation of the cost percentage to be applied to the retail inventory figure in order to reduce it to a cost-or-market valuation. It may be observed from Table 1 on page 29, that the cost inventory (line 11) is arrived at by applying to the resultant retail inventory (line 9) the percentage of cost, which is the difference between 100% and the percentage of mark-up (line 5, column 4). Since this mark-up percentage is computed on line 5, it is clear that the mark-downs recorded on line 7 have no effect whatsoever on the mark-up percentage, and, consequently, no effect on the cost percentage that is applied to the resultant retail inventory in order to arrive at a cost-or-market valuation. Whether the amount of these mark-downs be large or small, the cost percentage to be applied to the retail inventory figure remains unchanged. Yet the amount of additional or secondary mark-up, that is, additions to retail prices made subsequent to the original marking of the goods, is entered on line 4 of the same table; and, therefore, such additional mark-ups are included as a part of the mark-up percentage arrived at on line 5, column 4. Hence, these additional mark-ups affect the cost percentage that is applied to the retail inventory figure. At first it may appear unreasonable that additional mark-ups and mark-downs, both of which obviously affect the real maintained mark-up, or gross margin, (that

¹*A Standard Method of Accounting for Retail Stores*, published by the Controllers' Congress of the National Retail Dry Goods Association in 1922.

is, the difference between the cost of goods sold and the selling price) should not both be allowed to affect the cost percentage that is used in arriving at the cost-or-market valuation of the inventory. This distinction in treatment, however, is essential if the operation of the retail method is to result in inventory valuations at cost or market whichever is lower. To show why price changes downward are treated differently from price changes upward, each situation is considered singly in the following series of examples.

SIMPLE EXAMPLE

To take first of all another simple case, similar to the illustration at the beginning of the preceding chapter, in which there are no price changes following the original mark-up, the opening inventory in a suit department is assumed to be \$2,000 at cost and \$3,000 at retail. Purchases during the season amount to \$3,000 at cost and are priced at \$4,000 at retail; and sales during the season amount to \$5,000 at retail. The total cost of inventory and purchases thus is \$5,000, and the total retail value of the same merchandise is \$7,000; hence the mark-up is \$2,000, or 28.57% of the total retail figure. Since the total retail value of merchandise in stock at the beginning of the season plus the total retail value of purchases is \$7,000, and sales at retail have amounted to \$5,000, it follows that the retail value of the merchandise on hand at the end of the season must be \$2,000. Then the cost valuation of this retail inventory is the proportion of \$2,000 represented by 71.43% (that is, the difference between 100% and 28.57%), or \$1,428.60. The foregoing figures may be presented as in Table 2, page 32. In this example it is assumed for the sake of simplicity that there are no retail stock shortages.

It may be noted incidentally that the percentage of total cost in Table 2, 71.43%, is not the same as an average of the cost percentage for the opening inventory, 66.67%, and the cost percentage for the purchases, 75%, since an

TABLE 2
SIMPLE ILLUSTRATION OF RETAIL METHOD

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory...	\$2,000	\$3,000	\$1,000	33.33%	66.67%
Purchases (freight included in cost).....	3,000	4,000	1,000	25.00	75.00
Total of Inventory Plus Additions.....	5,000	7,000	2,000	28.57	71.43
Net Sales.....	.....	5,000	.....	.....	.....
Retail Book Inventory	.....	2,000	.....	.....	.....

Cost Valuation of Inventory = 71.43% of \$2,000 = \$1,428.60

average of these two figures would be 70.84%. Similarly, an average of the two mark-up percentages would be 29.17%, as compared with the total mark-up percentage figure of 28.57% appearing in Table 2. In operating the retail method, therefore, it is not possible to use percentages for total mark-up and total cost which are merely averages of the cost and mark-up percentages for the opening inventory and the cost and mark-up percentages for all the subsequent purchases. If reliable figures are to be secured, it is necessary to maintain complete cost and retail figures in dollars and cents throughout the period, and to derive from their totals the cost percentage to be applied to the closing retail inventory to reduce it to a cost valuation.

CASE OF ADDITIONAL MARK-UPS

One of the possible price changes that may take place during a season is an advance in retail prices occasioned by increased demand, shortage of merchandise, or other causes leading to higher replacement values. Taking as a starting point the simple situation illustrated in Table 2, if we assume that, subsequent to the original marking of the goods, retail prices during the season are increased \$300

TABLE 3
CORRECT METHOD OF HANDLING ADDITIONAL MARK-UPS

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory	\$2,000	\$3,000	\$1,000	33.33%	66.67%
Purchases (freight included in cost)	3,000	4,000	1,000	25.00	75.00
Additional Mark-up (net)		300	300		
Total of Inventory Plus Additions	5,000	7,300	2,300	31.51	68.49
Net Sales		5,215			
Retail Book Inventory		2,085			

Cost Valuation of Inventory = 68.49% of \$2,085 = \$1,428.02

by additional mark-ups, then the total of the retail inventory plus additions becomes \$7,300, instead of \$7,000; and the total of the mark-up becomes \$2,300 rather than \$2,000. It may be assumed also that sales during the season will increase in dollars and cents because of the increased total retail price. If sales at retail amount to \$5,215, then the retail value of merchandise on hand at the end of the season is \$7,300 minus \$5,215, or \$2,085. The total mark-up of \$2,300 is 31.51% of the total retail figure of \$7,300; consequently, the cost percentage is the complement of 31.51%, or 68.49%; and 68.49% of \$2,085 amounts to \$1,428.02, which is the cost valuation of the inventory. For purposes of comparison these figures are presented in Table 3, above. As may be observed, the cost valuation of the inventory is practically the same in Table 3 as in Table 2, \$1,428.02 as compared with \$1,428.60.

CASE WHERE ADDITIONAL MARK-UPS ARE NOT PERMITTED TO AFFECT THE COST PERCENTAGE

It may be noted from Table 3 that the inclusion of additional mark-ups to the amount of \$300 has changed

the cost percentage which was applied to the retail book inventory, although the original cost total of \$5,000 is in no way changed. The question may be raised, therefore, why the additional mark-ups should be allowed to affect the cost percentage. To illustrate this point, assume that the additional mark-ups, amounting to \$300, are not taken into account in computing the cost percentage. The situation then will appear as in Table 4, below.

TABLE 4
INCORRECT METHOD OF HANDLING ADDITIONAL MARK-UPS

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory . . .	\$2,000	\$3,000	\$1,000	33.33%	66.67%
Purchases (freight included in cost)	3,000	4,000	1,000	25.00	75.00
Total of Inventory Plus Additions	5,000	7,000	2,000	28.57	71.43
Additional Mark-up (net)		300			
		7,300			
Net Sales		5,215			
Retail Book Inventory		2,085			

Cost Valuation of Inventory = 71.43% of \$2,085 = \$1,489.32

It is evident that the figure shown in Table 4 for the cost valuation of the inventory, \$1,489.32, is higher than the corresponding figure in Table 3, namely \$1,428.02, which was practically the same as the corresponding figure in Table 2, \$1,428.60. Also, the cost percentage in Table 4, 71.43%, is the same as the cost percentage in Table 2, but it is higher than the cost percentage in Table 3, 68.49%. Again, the retail book inventory figure in Table 4, \$2,085, is the same as the retail book inventory figure in Table 3. Thus the reason for the higher figure for the cost valuation of the inventory in Table 4, \$1,489.32 as compared with

\$1,428.02 in Table 3, is that in Table 4 a higher cost percentage was applied to the same retail book inventory figure, (71.43% of \$2,085=\$1,489.32; whereas 68.49% of \$2,085=\$1,428.02). The fact that additional mark-ups have been taken, and also that the retail book inventory in Table 4 is higher than in the original example in Table 2, indicates rising market values. Therefore, the figure of \$1,489.32 may very well represent the real replacement cost value of the merchandise on hand at the end of the season. This figure, however, is higher than the figure for the cost valuation of inventory shown in Table 2, where there were no additional mark-ups; and to allow additional mark-ups to increase the cost valuation of the closing inventory would be running counter to a fundamental principle of merchandising, namely, that inventory should be valued at cost or market whichever is lower. When inventory is valued at a market figure which is higher than the actual cost, the effect, of course, is to show profits earned on merchandise before the goods actually are sold. This is not a conservative policy. In this instance, therefore, the correct cost valuation figure is \$1,428.02 rather than \$1,489.32, since the former figure represents a real cost that is lower than the current replacement value.

ADDITIONAL MARK-UPS SHOULD BE INCLUDED IN COMPUTATION OF COST PERCENTAGE

The effect of additional mark-ups, resulting in higher selling prices, naturally is to increase the amount of the retail book inventory. At the same time the effect of these additional mark-ups naturally is to increase the percentage of mark-up and to decrease the percentage of cost, since these two figures are complementary. (For example, if a piece of merchandise costs \$6 and bears a retail selling price of \$10, the percentage of mark-up is 40% and the percentage of cost is 60%. If, however, an additional mark-up of \$2 is taken, then the percentage of mark-up is

increased to 50% and the percentage of cost is decreased to 50%.) Therefore, in the case of additional mark-ups, the procedure illustrated in Table 3 is correct and that in Table 4 is incorrect. In Table 4 the cost percentage, 71.43%, was not allowed to be changed by the additional mark-ups, although the retail book inventory figure was increased. The result of applying the same percentage figure to a higher dollars-and-cents figure naturally was to increase the cost valuation of the inventory. In Table 3, however, the cost percentage did represent the effect of additional mark-ups, since it was 68.49% instead of 71.43%; and the result of applying a lower cost percentage to a higher retail book inventory figure was to give an inventory cost valuation of \$1,428.02, which was substantially the same as the original cost figure of \$1,428.60 shown in Table 2. Since their effect is to lower the cost percentage at the same time that they increase the retail book inventory figure, the net result of including additional mark-ups in the computation of the cost percentage is to give a cost valuation that is substantially the same as original cost.

These relationships perhaps may be illustrated more simply by the following example: The actual cost of merchandise in an inventory is \$300; and this represents 60% of \$500, the retail price originally placed on this merchandise. If additional mark-ups are taken to the amount of \$100, making the retail value \$600, the original cost percentage of 60% applied to \$600 results in a cost valuation of \$360, which is \$60 too high. To get back to the original cost of \$300, therefore, the cost percentage applied to \$600 must be 50%, which represents the relation between the original cost of \$300 and the total retail figure of \$600.

In order, therefore, not to inflate inventory values, it is essential to the proper operation of the retail method that additional mark-ups be included in the total retail and mark-up figures before the cost percentage is computed which is to be applied to the retail book inventory for the purpose of reducing it to a cost valuation.

CASE OF MARK-DOWNS

The next question to be considered is why mark-downs should not be treated similarly to additional mark-ups and deducted from the total retail and mark-up columns before the cost and mark-up percentages are computed. Again returning to the simple situation outlined in Table 2; if it is assumed that mark-downs of \$400 take place during the season instead of any additional mark-ups, the case will appear as in Table 5, below.

TABLE 5
CORRECT METHOD OF HANDLING MARK-DOWNS

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory.	\$2,000	\$3,000	\$1,000	33.33%	66.67%
Purchases (freight included in cost).	3,000	4,000	1,000	25.00	75.00
Total of Inventory Plus Additions	5,000	7,000	2,000	28.57	71.43
Net Sales . . . . .	.....	\$4,715	. . . . .	.....	.....
Mark-downs (net)	.....	400	5,115	.....	.....
Retail Book Inventory . . . . .	. . . . .	1,885	.....	.....	.....

Cost Valuation of Inventory = 71.43% of \$1,885 = \$1,346.46

The net sales figure in Table 5 is \$4,715. Because of the mark-downs taken this is lower than the sales figure of \$5,000 in Table 2. The retail value of merchandise on hand at the end of the season is \$1,885, since sales and mark-downs together amount to \$5,115, and the total retail value of the beginning inventory plus the purchases is \$7,000. To this retail book inventory figure of \$1,885 is applied the cost percentage, 71.43%, and the resulting figure for the cost valuation of the inventory is \$1,346.46. This cost percentage, 71.43%, is the same as the cost per-

centage used in Table 2, where no mark-downs were involved. The question may be asked, therefore, why the \$400 of mark-downs should not have been subtracted from the total retail figure of \$7,000 before the cost percentage was arrived at. The explanation follows.

CASE WHERE MARK-DOWNS ARE PERMITTED TO AFFECT
THE COST PERCENTAGE

Again the principle involved is that inventory should be valued at cost or market whichever is lower. If the mark-downs of \$400 actually should be deducted from the total retail figure of \$7,000 before the cost and mark-up percentages were computed, the situation would appear as in Table 6, below.

TABLE 6
INCORRECT METHOD OF HANDLING MARK-DOWNS

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory . . .	\$2,000	\$3,000	\$1,000	33 33%	66 67%
Purchases (freight included in cost)	3,000	4,000	1,000	25.00	75.00
Total of Inventory Plus Additions.	5,000	7,000	2,000	. . .	. . . . .
Mark-downs (net)		400	400	. . . . .	. . . . .
Total of Inventory Plus Additions, Less Mark-downs (net)	5,000	6,600	1,600	24.24	75.76
Net Sales . . . . .	. . . . .	4,715	. . . . .	. . . . .	. . . . .
Retail Book Inventory . . . . .	. . . . .	1,885	. . . . .	. . . . .	. . . . .

Cost Valuation of Inventory = 75.76% of \$1,885 = \$1,428.08

It is evident that the figure for the cost valuation of the inventory in Table 6 is higher than the corresponding figure in Table 5, \$1,428.08 as compared with \$1,346.46. Also, the cost percentage of 75.76% appearing in Table 6 is

higher than the cost percentage of 71.43% in Table 5. At the same time, the retail book inventory figure is the same in each instance, \$1,885. It is seen, further, that the figure for the cost valuation of merchandise in Table 6, \$1,428.08, is substantially the same as the original cost valuation of approximately \$1,428 in Tables 2 and 3, where there were no mark-downs to be taken into consideration. Thus the figure of \$1,428.08 for the cost valuation of the inventory in Table 6 evidently is close to the original cost of the merchandise in question. This figure results because the method followed in Table 6 is analogous to that pursued in Table 3. In Table 3, the effect of the additional mark-ups was to decrease the cost percentage; in Table 6 the effect of the mark-downs is to increase the cost percentage, since the cost and mark-up percentages are complementary. (For example, if merchandise costing \$6 originally is marked to sell at \$10, the mark-up percentage is 40% and the cost percentage is 60%. If this merchandise later is marked down to \$8, the mark-up is lowered to 25%, and the cost percentage increased to 75%.) The effect of the mark-downs, since they lower prices, also is to decrease the retail book inventory. What really takes place in Table 6, therefore, is the application of a higher percentage to a lower dollars-and-cents figure. Conversely, in Table 3, a lower percentage was applied to a higher dollars-and-cents figure. The result in each case is substantially the same, that is, a figure of about \$1,428, which is the original cost valuation of the inventory as shown in Table 2. This procedure would be entirely logical if it were desired always to secure an inventory valuation figure representing as accurately as possible the original cost of the merchandise. In other words, if both additional mark-ups and mark-downs were taken into consideration in determining the cost percentage, the retail method of inventory always would be essentially a cost method and never would give an inventory valuation figure lower than the original cost of the merchandise.

MARK-DOWNS SHOULD NOT BE INCLUDED IN COMPUTATION
OF COST PERCENTAGE

As every merchant knows, however, there are circumstances under which conservative practice requires that inventory be valued at a figure lower than the original cost. At the end of 1920, for example, replacement costs of many classes of merchandise were far below original cost, and sound policy required the reduction of inventory values to a replacement level. The safe rule to follow is "cost or market whichever is lower." Therefore, the procedure in Table 6 is incorrect and that in Table 5 is correct. The original cost percentage in Table 5, applied to the lower retail book inventory figure caused by mark-downs, results in a market valuation figure of \$1,346.46. When mark-downs are taken into account in computing the cost percentage, as in Table 6, their effect is to increase the cost percentage and, consequently, to bring the inventory valuation figure up to one closely approximating the original cost. Thus the procedure followed in the case of additional mark-ups cannot be paralleled in the case of mark-downs; and, therefore, it is incorrect to offset additional mark-ups by mark-downs, or vice versa.

The following simple example will serve to illustrate the principle involved in the case of mark-downs: The real cost of an inventory is assumed to be \$300, or 60% of the total retail value of \$500. If the retail value is decreased to \$400 by mark-downs, the new relation of the cost to the retail figure will be 75% rather than 60%. If this figure of 75%, which is a result of subtracting mark-downs before the cost percentage is determined, is applied to \$400, the result, of course, is the original cost of \$300. Since mark-downs, however, are indicative of a declining market, it is not desirable to value inventory at the original cost figure. The ratio of mark-downs to the original retail price is 20%; on the assumption that there has been a proportional decline in the market value, this market value should be

20% lower than the original cost of \$300, or \$240. If 60%, which is the original cost percentage computed without taking mark-downs into account, is applied to \$400, the result is the desired market valuation of \$240.

Under normal conditions, of course, both additional mark-ups and mark-downs are likely to take place during a season. In Table 2, page 32, a simple example was given in which there were neither additional mark-ups nor mark-downs. Table 3, page 33, illustrated the correct method of handling additional mark-ups, and Table 5 exhibited the correct procedure in the case of mark-downs. Table 7, below, summarizes the complete method, showing both additional mark-ups and mark-downs, and also the retail stock shortage, the cost of merchandise sold, and the gross margin.

TABLE 7
ILLUSTRATIONS OF COMPLETE RETAIL INVENTORY FORMULA

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory	\$2,000	\$3,000	\$1,000	33.33%	66.67%
Purchases (freight included in cost)	3,000	4,000	1,000	25.00	75.00
Additional Mark-up (net)	.....	300	300	.. ..	.....
Total of Inventory Plus Additions.	5,000	7,300	2,300	31.51	68.49
Net Sales	.....	\$4,935	.....	.....	.....
Mark-downs (net)	.....	<u>400</u>	5,335	.....	.....
Retail Book Inventory	.....	1,905	.....	.....	.....
Actual Retail Inventory	.....	<u>1,940</u>	.....	.....	.....
Retail Stock Shortage	.....	25	.....	.....	.....

Cost Valuation of Inventory = 68.49% of \$1,940 = \$1,328.71

Cost of Merchandise Sold = \$5,000.00 minus \$1,328.71 = \$3,671.29

Gross Margin = \$4,935.00 minus \$3,671.29 = \$1,263.71, 25.61% of net sales.

In the example in Table 7, it is assumed that an actual physical inventory at retail is taken in order to check the accuracy of the book figures. By this means, a retail stock shortage of \$25 is found to exist. In other words, the merchandise actually on hand amounts, at retail prices, to \$25 less than the amount which the books indicate should be on the shelves. Stock shortages, of course, may be due either to actual loss of goods by theft or otherwise, or to clerical errors. If the retail book inventory figure is correct, then any shortage shown is an actual shortage. If, however, there is doubt as to the accuracy of the retail book inventory figure, then the shortage possibly is a book shortage rather than an actual shortage.

DETERMINING GROSS MARGIN

In the example in Table 7, the cost of merchandise sold, \$3,671.29, is determined by subtracting the cost valuation of the inventory, \$1,328.71, from the total cost of inventory plus additions, \$5,000. Then the gross margin is the difference between the net sales figure of \$4,935 and the cost of merchandise sold figure of \$3,671.29, or \$1,263.71. Thus the gross margin in this instance amounts to 25.61% of net sales. In this case the physical inventory taken at retail prices was found to be \$1,940; and to this figure, therefore, was applied the cost percentage of 68.49% in order to arrive at the cost valuation of the inventory. It obviously would have been possible to work out figures for the cost valuation of the inventory, the cost of merchandise sold, and the gross margin, on the basis of the retail book inventory figure of \$1,965, without recourse to a physical inventory, the only difference being the neglect of the element of stock shortage.

In the example in Table 7 it is to be noted that the figure for cost of merchandise sold, \$3,671.29, includes not only the actual cost of goods sold but also the elements of stock shortage and depreciation. Thus the gross margin fig-

ure of \$1,263.71 represents the real gross margin realized after taking stock shortages into account and after anticipating losses that will be incurred in the subsequent sale of depreciated merchandise now in stock. Therefore, the stock-ledgers for the ensuing period may be opened with the following figures:

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory . . .	\$1,328 71	\$1,940 00	\$611 29	31 51%	68.49%

In Table 7, both the additional mark-ups and the mark-downs were designated as net figures; and in the standard form in Table 1, page 29, it may be noted that these items read respectively "additional mark-up, less additional mark-up cancelations," and "mark-downs, less mark-down cancelations." Since, for the reasons previously explained, mark-downs in the operation of the retail inventory method are treated differently from additional mark-ups, the desirability is obvious of making careful distinctions, first, between a mark-down and a cancelation of an additional mark-up, and, second, between an additional mark-up and a cancelation of a mark-down.

ADDITIONAL MARK-UP CANCELATION

It may happen that a garment priced at \$20 is advanced to \$22.50, and later during a clearance sale is reduced in price to the original figure of \$20. In this instance, the \$2.50 reduction from \$22.50 to \$20 clearly is not a mark-down but a cancelation of the additional mark-up, and should be so considered for the purposes of the retail method. Furthermore, if this garment in the clearance sale is reduced from the price of \$22.50 to a retail price of \$17, the entire amount of the price reduction, \$5.50, is not to be considered as a mark-down; since \$2.50 of this reduction is a cancelation of an additional mark-up, only the remain-

ing \$3 constitutes a real mark-down. In other words, there is no real mark-down until the price is carried below the original retail price.

MARK-DOWN CANCELATION

Similarly, in the case of mark-downs, a cancelation of part or all of a mark-down may take place. For example, a garment priced at \$20 may be reduced to \$18 for a special sales event; and after the termination of the sales event, the price of this garment may be restored to \$20. In this case, the \$2 price increase is not to be treated as an additional mark-up, but is rather a cancelation of the mark-down. In other words, there is no additional mark-up until the price goes above the original retail price.

Though sometimes overlooked, these distinctions for the purpose of securing real net figures for mark-ups and mark-downs are desirable from the standpoint of strict accuracy in the operation of the retail method.

IV

ADVANTAGES

Use of cost codes. Greater simplicity of taking inventory at retail figures. Difficulty in accurate valuation of inventory under cost method. Income tax regulations with respect to determining market value. Depreciation practically automatic under retail method. Need for book records of merchandise in stock. Four possible methods. Retail method provides necessary book records. Comparison of retail method with other book inventory plans. Outstanding advantage of retail method—shows full effect of mark-downs on profit. This feature of the retail method important for departmental control.

BUSINESS firms using the retail method of inventory have found that this method affords certain advantages over other plans of merchandise accounting commonly used. These advantages naturally divide themselves into two groups: (1) advantages connected with the actual taking of stock at inventory time, and (2) advantages in facilitating merchandise control.

In numerous retail businesses the common practice is to designate the cost of an article of merchandise by code letters or numbers appearing on the ticket. One department store, for instance, used for several years the code "DON'T SWEAR." In this code, "D" represented one, "O" two, "N" three, and so on. For zero, "X" was used, and "Y" was employed to indicate repetition of the preceding number. The billed cost prices of all articles of merchandise in the store were indicated on the tickets by means of this code. Various other types of cost codes, some more complicated, others less, are used in many stores, since a vast majority of retail merchants naturally prefer not to place the actual cost of the merchandise on the tickets for customers and salespeople to see.

When inventory is taken to determine the cost value of merchandise on hand, it is necessary, of course, that the

code letters or numbers indicating the cost of each article be decoded in order to arrive at the actual dollars-and-cents cost figures. Not only does this add to the clerical work of inventory, but in writing down code numbers and in decoding them it is easy to make mistakes. When a mistake of this kind is made, the inventory figure comes out either higher or lower than the real cost value of the merchandise on hand; and in consequence the profit is either overstated or understated. Furthermore, where book figures are available to afford a check on stock shortages, mistakes in decoding at inventory time frequently result in indicating stock shortages or overages that actually do not exist. For instance, a sporting goods firm in an eastern city a few years ago discovered what appeared to be a large stock shortage in the firearms department. This firm was about to discharge one of its employees on suspicion of theft when the auditor discovered that the supposed shortage really did not exist, but that the cost figures had been wrongly decoded when the inventory was taken.

GREATER SIMPLICITY OF TAKING INVENTORY AT RETAIL FIGURES

Under the retail method of inventory, as the name indicates, the inventory actually is taken at the retail figures, which, of course, ordinarily are plainly written or printed on the merchandise tickets. Errors, therefore, are much less likely to occur, since there is no copying of code letters or numbers and no decoding. In fact, many department-store firms using the retail method no longer mark the cost prices on merchandise tickets, but rely entirely on the retail prices for inventory purposes. Other firms have considered it desirable to retain the cost code on merchandise tickets, but make use of it in inventorying only at intervals of two or three years, and then solely for the purpose of checking the accuracy of the retail method.

In addition to the protection afforded against error, a

distinct saving of time has been found possible where the retail method is used. In several instances it has been the experience of department-store firms that the use of the retail method cut in half the time ordinarily necessary for a general inventory throughout the store. In some cases, furthermore, firms using the retail method have found it possible to discontinue the general physical inventory taken semiannually in all selling departments, and to substitute for it a plan of taking inventory piecemeal by departments whenever conditions are favorable, such as in periods of slack business or in periods when stocks are low. The physical inventory thus becomes merely a check on the book figures, and the book inventory figures are used in closing the books for the purpose of determining profit. Such a method of procedure, of course, creates far less confusion than the usual semiannual stock-taking in all departments simultaneously. This plan, however, makes no allowance for stock shortages that may have developed in a department since the previous actual inventory; and some firms using the retail method, therefore, continue the practice of taking a physical inventory twice a year in all departments at once.

DIFFICULTY IN ACCURATE VALUATION OF INVENTORY UNDER COST METHOD

More important than the protection against error and the saving in time and expense, however, is the advantage afforded by the retail method in determining the proper valuation of merchandise stocks, especially in a declining market. Federal income tax regulations do not permit the use of arbitrary percentages of depreciation. They are especially explicit on this point; as previously pointed out, it is no longer possible for a merchant to take inventory at billed cost and then reduce this figure by 10% to allow for depreciation. As the regulations now stand, retail merchants may value their inventories (1) at cost, (2) at cost

or market whichever is lower, or (3) according to the retail method of inventory. Naturally, numerous merchants prefer not to follow the plan of valuing their inventories in all cases at cost. This is especially true in periods of rapidly declining wholesale prices, and also in the case of merchandise that has a rapid rate of depreciation because of its style features. Unless the inventory is to be valued at cost, however, a merchant using the cost-or-market method strictly ought to appraise the market value of each item of merchandise. The "market value," of course, means the price at which the merchandise can be purchased by the firm in the open wholesale market. Even under favorable circumstances, an appraisal of market value item by item is an arduous task in a department store carrying thousands of different articles of merchandise. The controller of an eastern department store, with sales in excess of \$25,000,000 annually, which adopted the retail method of inventory in 1923 stated that prior to that change the expense and difficulty of making an accurate appraisal at inventory time in order to arrive at a true cost-or-market valuation of the goods in stock had appeared so great that for several years the firm had preferred to take inventory at cost and run the chance of paying income taxes on unrealized profits.

For individual items of merchandise, furthermore, the wholesale market value frequently is not easy to ascertain. In the case of seasonal merchandise, such as women's suits, for instance, some goods may be carried over from the fall season and may remain in stock when inventory is taken, say, at the end of January. At that time, ordinarily, similar goods are not being offered by manufacturers, and it is, therefore, difficult to find out the market value. Even if wholesale price quotations can be obtained on merchandise almost similar in workmanship and quality, the style features may have changed to such an extent that these quotations cannot be taken as indicating the real value to the firm of the merchandise it has in stock. Again, a merchant

may be overstocked with certain sizes of shoes, for example, or may have size lines so badly broken that it is difficult to fit customers. In this situation it is doubtful whether the market quotation for corresponding merchandise really indicates a correct valuation of the goods the merchant has in stock.

INCOME TAX REGULATIONS WITH RESPECT TO DETERMINING MARKET VALUE

Under these circumstances it is not always a simple matter to comply with the federal tax regulations. The following excerpts from Regulations 62 indicate some of the requirements with which a merchant may have to comply if he undertakes to value his inventory at cost or market whichever is lower.

. . . . The basis of valuation most commonly used by business concerns and which meets the requirements of the Revenue Act is (a) cost or (b) cost or market whichever is lower. . . . Any goods in an inventory which are unsalable at normal prices or unusable in the normal way because of damage, imperfections, shop wear, changes of style, odd or broken lots, or other similar causes, including second-hand goods taken in exchange, should be valued at bona fide selling prices less cost of selling whether basis (a) or (b) is used. . . . The burden of proof will rest upon the taxpayer to show that such exceptional goods as are valued upon such selling basis come within the classifications indicated above, and he shall maintain such records of the disposition of the goods as will enable a verification of the inventory to be made.¹

Under ordinary circumstances, and for normal goods in an inventory, "market" means the current bid price prevailing at the date of the inventory for the particular merchandise in the volume in which usually purchased by the taxpayer. . . . Where no open market exists or where quotations are nominal, due to stagnant market conditions, the taxpayer must use such evidence of a fair market price at the date or dates nearest the inventory as may be available, such as specific purchases or sales

¹Article 1582, page 317: Regulations 62, Treasury Department, United States Internal Revenue, 1922 edition.

by the taxpayer or others in reasonable volume and made in good faith, or compensation paid for cancelation of contracts for purchase commitments. Where the taxpayer in the regular course of business has offered for sale such merchandise at prices lower than the current price as above defined, the inventory may be valued at such prices less proper allowance for selling expense, and the correctness of such prices will be determined by reference to the actual sales of the taxpayer for a reasonable period before and after the date of the inventory. Prices which vary materially from the actual prices so ascertained will not be accepted as reflecting the market.¹

These regulations, it will be noted, provide that "goods in an inventory which are unsalable at normal prices . . . because of damage, imperfections, shop wear, changes of style, odd or broken lots, or other similar causes . . . should be valued at bona fide selling prices less cost of selling. . . ." The burden of proof, furthermore, rests on the taxpayer to show that merchandise valued on such a basis really is unsalable at normal prices because of the reasons specified. Again, it will be noted that "where no open market exists or where quotations are nominal . . . the taxpayer must use such evidence of a fair market price at the date or dates nearest the inventory as may be available" and also that "where the taxpayer in the regular course of business has offered for sale such merchandise at prices lower than the current price . . . the inventory may be valued at such prices less proper allowance for selling expense" It appears, therefore, that in the case of broken lots or obsolete styles, a merchant is permitted to value his inventories at bona fide selling prices less the cost of selling; and that where a merchant has offered goods for sale at prices lower than the current market value as best ascertainable under conditions where no open market exists, he may value these goods at selling price less proper allowance for selling expense.

¹Article 1584, page 319: Regulations 62, Treasury Department, United States Internal Revenue, 1922 edition.

The question may be raised, however, as to what constitutes a proper allowance for cost of selling. The term "selling expense" as ordinarily interpreted by an accountant includes only such items as salaries and wages of salespeople and sales executives, advertising expenses, and supplies, such as boxes, paper, and twine. Selling expense in this narrow sense ordinarily does not constitute more than half the entire cost of doing business. It is reasonable to suppose that the term "selling expense" as used in the federal income tax regulations is intended to cover the entire cost of doing business. It is a question, however, whether even this broad interpretation of the term makes the provision wholly satisfactory. It would seem more reasonable if it were stipulated that such merchandise should be valued at bona fide selling price less proper allowance for mark-up.

DEPRECIATION PRACTICALLY AUTOMATIC UNDER RETAIL METHOD

The foregoing discussion indicates some of the difficulties that may be encountered by a retail merchant, especially one in the wearing apparel trade, who undertakes to value his inventory at cost or market whichever is lower. Under the operation of the retail method, on the other hand, valuation at cost or market whichever is lower is a much simpler matter. In cases where the real market value is lower than the cost, the depreciation of inventory to a fair market valuation is practically automatic, provided always that proper retail mark-downs have been taken. The actual inventory is taken at selling prices; the aggregate of these selling prices fairly represents what the merchant can expect to secure for the goods he has in stock; and the deduction from this figure of the amount of mark-up gives a figure that represents the real value of the goods to the merchant. If proper retail mark-downs have been taken, a correctly depreciated cost figure thus is obtained by simple arithmetic. On a constant or rising market, the retail

method of inventory values the merchandise approximately at cost, but on a falling market it results in a valuation at cost or market whichever is lower.

The important advantages of the retail method at the time of actual stock-taking for the purpose of closing the books thus are (1) the protection against error, (2) the saving in time, and (3) the facilitation of a proper valuation of merchandise in stock, especially when market value is lower than cost. In the eyes of many department-store executives, the retail method of inventory needs to seek no further than these advantages for justification. Again it must be pointed out, however, that the retail method of inventory is more than a mere method of valuing merchandise stocks. It is, in effect, a method of merchandise accounting, and as such has advantages from the point of view of merchandise management and control that probably are of greater importance than the group of advantages already enumerated.

NEED FOR BOOK RECORDS OF MERCHANDISE IN STOCK

As previously indicated, in a retail business there are four important reasons for maintaining book figures to show at any time the amount of merchandise that has been sold and the amount that should be on hand:

1. *In order to ascertain the amount of stock shortage.* Unless stock shortages are to be absorbed in the figure for cost of merchandise sold, it is necessary that book inventory figures be arrived at independently of the closing physical inventory.

2. *In order to facilitate the intelligent planning of sales, stocks, and purchases.* Overbuying frequently results from ignorance of amounts of merchandise actually in stock, and a merchant ordinarily cannot resort to a physical inventory every time he wishes to determine how much to buy.

3. *In order to afford a basis for insurance settlements.* The merchant whose books show the exact amount of merchandise on hand at the time of the fire is in a much stronger position than the merchant who has no such book figures to indicate exactly how much merchandise was in stock and who can give only an approximate figure based on his most recent physical inventory.

4. *In order to permit the periodical determination of profit without resort to a physical inventory.* In a department store, it is desirable to know each month, or even more frequently, the amount of gross margin that is being realized in each department; in most cases, however, it would be out of the question to take a physical inventory that often.

FOUR POSSIBLE METHODS

There are various ways in which such book figures may be secured. First, a system of stock records may be kept in physical units in such a way as to provide a perpetual book inventory. At any time such a stock record system will show, of course, what units of merchandise have been sold and what units still are on hand. For various reasons, however, it is not considered feasible in many businesses to maintain such records for all types of merchandise. Frequently the keeping of such records may entail more expense than the results justify. Furthermore, stock records in physical units do not in all cases tie in fully with the financial records.

A second possibility is to reduce the net sales figure to cost by subtracting from it the amount that represents the mark-up, or the difference between the cost and the selling price. If the maintained percentage of mark-up is known approximately, for the purpose of making a rather rough estimate, it may be applied to reduce the net sales figure to an approximate figure for cost of merchandise sold; and

from this can be secured an approximate figure for the cost of merchandise remaining on hand. A drawback to this plan is that the maintained percentage of mark-up may not be accurately enough known; in fact, one of the reasons for securing a book figure for the cost of merchandise sold is to ascertain the maintained percentage of mark-up. For one thing, not all goods in a department are given the same percentage of mark-up; and since there is variation in the amounts of goods bearing different rates of mark-up, these mark-up percentages cannot be averaged safely.

In the third place, a cost-of-merchandise-sold figure may be accumulated from day to day by making a cost audit of sales; that is, the cost price of each article sold may be recorded on the sales slips or otherwise, either at the time of sale or later, and these cost figures audited in the usual manner. Then at any time a book figure is available for the accumulated cost of merchandise sold in each department, and this figure can be used for the purpose of estimating profits. Also, this book figure for cost of merchandise sold can be subtracted from the total of beginning inventory and purchases, leaving a book figure for the cost of merchandise on hand; this latter figure may be used to facilitate the planning of purchases, and at the end of the period it can be checked with the actual physical inventory figure, for the purpose of determining the amount of stock shortage, if any. It is, of course, necessary that such book figures be checked with actual inventory figures as frequently as practicable, not only because stock shortages may have occurred since the previous physical inventory, but also because the book figures do not show the amount of merchandise depreciation unless the cost records have been adjusted to take into account declining market prices, a procedure that frequently is not feasible.

The fourth method of securing book figures for the amount of merchandise sold and the amount of merchandise remaining on hand is the retail method of inventory. Since by this method stocks and purchases are recorded at

retail, it is necessary only to subtract from this total the sales and mark-downs in order to determine the retail value of the goods that should be on hand.

RETAIL METHOD PROVIDES NECESSARY BOOK RECORDS

The retail method provides a book figure for the selling-price value of merchandise on hand at any time. When a physical inventory is taken at retail, a comparison of the book figure for the retail value of merchandise on hand with the retail value of the goods actually discovered to be in stock reveals the amount of the retail stock shortage, or overage, as the case may be. For instance, in Table 7, Chapter III, page 41, the retail value of the merchandise that should have been on hand according to the book record was \$1,965, whereas the actual inventory at retail amounted to \$1,940. Thus a retail stock shortage of \$25 was revealed. The amounts of any shortages or overages thus brought to light, of course, are at retail rather than at cost; but from the standpoint of control, it makes little difference whether a stock shortage is measured in retail figures or in cost figures. The important thing is that there should be some check, so that a merchant need not remain in ignorance of any losses that he may be incurring on account of stock shortages. A check on stock shortages also is afforded by the cost-audit plan, and by this method shortages or overages are revealed in cost figures. Neither the cost audit nor the retail plan, however, indicates exactly where or why a shortage has occurred. On the other hand, a system of stock records maintained in physical units is an aid in tracing shortages. As previously pointed out, however, it is not always feasible to maintain a complete system of stock records for all types of merchandise, because of the expense involved.

As an aid to the intelligent planning of sales, stocks, and purchases, the retail method has been found superior to the cost-audit method for the reason that it provides retail book

figures for the value of merchandise on hand rather than cost figures; and the whole trend of modern merchandise planning, as explained in Chapter II, is in the direction of greater emphasis on the selling price figures and less emphasis on the cost figures. This conclusion is corroborated by the fact that in a considerable number of department stores where the full retail method is not used in closing the books for the purpose of determining profit and loss, nevertheless, in each selling department stocks and purchases are recorded at retail as well as at cost in order to facilitate merchandise control. From the standpoint of merchandise control, the smaller the subdivisions within the departments for which separate retail stock-ledgers are operated, the greater is the value of the information obtained. In departments where it is applicable, however, a stock record of the physical units of merchandise frequently is more useful in the control of stocks than are the dollars-and-cents figures provided by either the cost-audit method or the retail method. The retail method, therefore, is in no sense a system that will take the place of stock records in the case of merchandise where the unit of sale is sufficiently large to justify the maintenance of records in physical units; rather the two should be mutually supplementary.

With respect to use in providing a basis for insurance settlements, there is, perhaps, little choice between the retail method and the cost-audit method, so far as results are concerned. Insurance companies have manifested their willingness to accept the valuation figures arrived at by means of the retail method as a basis for settlements.

Under the retail method, it is not necessary to take a physical inventory in order to determine accurately the amount of gross margin that has been realized during a given period. The use of the retail method in this connection may be illustrated by further reference to the example previously cited in Table 7, on page 41. If in this case it be assumed that no physical inventory is taken, the figures will appear as in Table 8, on the opposite page.

TABLE 8
DETERMINING GROSS MARGIN BY RETAIL METHOD

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory.	\$2,000	\$3,000	\$1,000	33.33%	66.67%
Purchases (freight included in cost)	3,000	4,000	1,000	25.00	75.00
Additional Mark-up (net).....	.....	300	300	.....	.....
Total of Inventory Plus Additions..	5,000	7,300	2,300	31.51	68.49
Net Sales .....	.....	\$4,935	.....	.....	.....
Mark-downs (net) ..	.....	400	5,335	.....	.....
Retail Book Inventory.....	.....	1,965	.....	.....	.....

Cost Valuation of Inventory = 68.49% of \$1,965 = \$1,345.83
 Cost of Merchandise Sold = \$5,000.00 minus \$1,345.83 = \$3,654.17
 Gross Margin = \$4,935.00 minus \$3,654.17 = \$1,280.83, 25.95% of net sales

The computations illustrated in Table 8, of course, do not take into account the element of retail stock shortage, which can be determined only by taking a physical inventory at selling-price figures. As shown by the figures in this table, however, it is not necessary to take an actual inventory in order to determine gross margin. In this instance, the gross margin realized during the period is found to be \$1,280.83, or 25.95% of net sales. Obviously there is no reason why these simple computations may not be made monthly, weekly, or as often as desired, solely for the purpose of finding out exactly the amount of gross margin that has been realized; and then a merchant no longer needs to rely on guesswork between inventory dates to tell him how much profit he is making.

Thus the book inventory figures obtained by the retail method serve all the purposes for which such figures are needed; they reveal the amount of stock shortages; they facilitate the planning of sales, stocks, and purchases; they

afford a basis for insurance settlements; and they permit the determination of profit as often as desired without the necessity of a physical inventory.

COMPARISON OF RETAIL METHOD WITH OTHER BOOK INVENTORY PLANS

Among the other methods of determining book figures to serve these purposes, systems of stock records maintained in physical units clearly are supplementary in nature; they are not adapted to use in connection with some types of merchandise; they are subject to some degree of error; and it is frequently difficult to maintain a complete tie-in between the records in physical units and the records in dollars and cents. In general, a stock-record system is not an acceptable substitute for a system of merchandise accounting.

Another possibility, namely that of determining the cost of merchandise sold by subtracting from net sales the proportion that represents the mark-up, ordinarily has to be rejected on the grounds of inaccuracy. Even though a fairly uniform rate of original mark-up is used in the store or department, the situation is likely to become thoroughly confused after a few mark-downs have been taken. For example, merchandise purchased at a cost of \$2,000 may be marked to sell at \$3,000. The percentage of original mark-up then is 33.33% of the selling price of \$3,000. Later a mark-down of \$250 may be taken. This represents a mark-down of 8.33% on the basis of the original selling price of \$3,000 and a mark-down of 9.09% on the basis of the new selling price of \$2,750. After the mark-down has been taken, the mark-up on the goods is \$750, or 27.27% of the new selling price of \$2,750. This new mark-up figure of 27.27%, it is to be noted, cannot be obtained by deducting from the original mark-up percentage of 33.33% the percentage of mark-down either as figured on the original selling price or as figured on the new selling price. Not all the

goods in a department, furthermore, will be marked down at the same time, or to the same extent. Thus it is not possible under the plan suggested to arrive at anything more than a very rough guess as to the percentage of mark-up that should be deducted from sales during a given period in order to determine the cost of merchandise sold. In short, in order to find out accurately the maintained percentage of mark-up, it is necessary to keep practically the same dollars-and-cents records as required for the retail method; and, in fact, the use of such a percentage to reduce sales to a cost basis amounts to substantially the same thing as the retail method, except that the perpetual book inventory is maintained on a cost basis instead of on a retail basis.

If, therefore, a firm is considering the adoption of a method of merchandise accounting that will furnish book figures to show at any time the amount of merchandise that has been sold and the amount that should be on hand, the choice clearly lies between the retail method and the cost-audit method. As previously explained, the cost-audit method involves the day-to-day accumulation of figures for the cost of all merchandise sold. To record on the sales slips, or otherwise, the cost of each article sold, while an entirely feasible procedure in small specialty stores where the unit of sale is large, is a tremendous undertaking for a department store selling thousands of different articles of merchandise daily. Not only does a cost audit of sales tend to slow up the general sales audit, but it also is a fruitful source of error, particularly if the salespeople must mark the cost figures in code on the sales slips.

OUTSTANDING ADVANTAGE OF RETAIL METHOD—SHOWS FULL EFFECT OF MARK-DOWNS ON PROFIT

Entirely aside from these disadvantages of the cost-audit plan, however, the retail method of merchandise accounting offers one advantage of far-reaching importance over the plan of cost auditing sales—it shows at any time the

Under the cost-audit method, the effect of the mark-downs, amounting to \$1,000 at retail, on the gross margin is not shown, except in so far as these mark-downs may have been instrumental in making the net sales figure smaller than it otherwise might have been. By this method the major effect of the mark-downs on the gross margin will be shown only when a properly depreciated physical inventory is taken. Meantime the department manager may assume that his maintained gross margin is well in excess of 20% of sales. By the retail method, however, the losses which will be incurred from mark-downs already taken on the goods that remain in stock are at once anticipated, the maintained gross margin shown to be only 15.15% of net sales, and the true condition of the department thus made apparent. Although this example perhaps represents a more extreme situation than would be of frequent occurrence, it is entirely possible under the cost-audit method for a buyer to go through a whole season assuming that he is maintaining a satisfactory gross margin, only to find, when an actual inventory is taken, that because of mark-downs his maintained mark-up is by no means as high as he had thought.

Thus under the retail method, the percentage of maintained mark-up is adjusted week by week in accordance with mark-downs taken; whereas under the cost-audit plan a readjustment must occur at the end of the season when a physical inventory is taken and the merchandise valued at cost or market whichever is lower. This feature of the retail method has an important bearing on several problems of store management.

THIS FEATURE OF THE RETAIL METHOD IMPORTANT FOR DEPARTMENTAL CONTROL

In the first place, the management and control of merchandise operations in departments is facilitated. In a men's

described for handling mark-downs was not in accordance with the standard plan approved by the Controllers' Congress of the National Retail Dry Goods Association.

furnishings department, for example, a gross margin of 30% of net sales may have been attained during one season, and for the ensuing season it is planned to secure a gross margin of 32%. For the adequate control of this department, comparisons need to be made from time to time between the rate of gross margin actually being realized and the planned figure. If the retail method is in use, a direct comparison is available, because there is assurance that the rate of maintained gross margin at any time during the season will not be subject to adjustment for depreciation when the physical inventory is taken at the end of the season. If at the end of the first three months of the season the maintained rate of gross margin is 33% of sales, this may be compared directly with the planned figure of 32%, with the assurance that at inventory time no readjustment will be necessary except to account for the element of stock shortages. On the other hand, if the cost-audit plan is in use, the book figure for maintained gross margin at any time between physical inventories cannot be compared directly with the planned figure, because no allowance has been made for the effect on gross margin of the mark-downs on the goods still unsold. Even though midway during the season the maintained gross margin should be 34% of sales, for example, it is not at all impossible that the necessary readjustments at inventory time to account for depreciation of merchandise in stock will lower this figure to 30% or 29%. Of course, the condition of the department can be learned approximately by comparing records of sales, maintained mark-up, and mark-downs to date with the planned figures, or the corresponding figures for the same season of the preceding year. Yet it is much simpler to use for purposes of comparison a maintained mark-up figure that anticipates the effects of mark-downs on goods still remaining in stock. It is then easier for the merchandise manager to see at a glance the true condition of the department, and also easier for him to explain the situation to the buyer. If under the cost-audit plan a buyer is maintaining a mark-up

of 33% or 34% in comparison with a planned figure of 32%, it may be difficult to convince him that the adjustment for merchandise depreciation at inventory time will bring his maintained mark-up below the planned figure.

Furthermore, when the remuneration of buyers depends in part, as it frequently does, on the amount of gross margin obtained in their departments, the retail method of merchandise accounting makes for smoother relations between the buyers and the management. It is natural for a buyer, in case the amount of his salary depends in part on the gross margin or the net profit shown for his department, to reckon up, as the season progresses, the sum that is due him on the strength of the showing in his department to date. Then at the end of the season, the physical inventory is taken at cost or market whichever is lower, and the maintained percentage of mark-up is reduced because of the depreciation which is then revealed on the merchandise remaining in stock. If such reduction in the maintained mark-up is considerable, as is frequently the case, the buyer is disappointed and even may be inclined to feel that the management has not dealt fairly with him. Where the retail method of inventory is in use, however, and the buyer is thoroughly familiar with its operation, such misunderstandings are much less likely to occur, because the maintained mark-up percentage shows at all times the real condition of the department, aside from such slight adjustments as may need to be made at inventory time for stock shortages.

In this connection the educational value of the retail method is not to be overlooked. Although some effort may be necessary to make buyers thoroughly familiar with the operation of the retail plan, once it is understood it tends to make buyers think in terms of selling prices rather than of cost prices, and makes them consider what their stocks are really worth on a valuation basis, instead of misleading themselves with the notion that the entire difference between the cost and the original retail price can be counted as gross profit.

The use of the retail method also has some slight effect on the financial management of a business, since it is possible under this plan to draw off at any time true operating statements and balance sheets for the business as a whole. An entry for the value of merchandise on hand is necessary both on an operating statement and on a balance sheet. If a firm conducts its merchandise accounting on any other basis than the full retail method, strictly accurate operating statements and balance sheets can be produced only at inventory time, because in the interim the inventory valuation figures do not reflect depreciation on unsold merchandise.

V

OBJECTIONS

Retail method is an averaging method. No difficulty when same proportions of high mark-up and low mark-up goods are maintained. Retail method gives too low a valuation when closing inventory includes more high-cost goods than the average. Retail method gives too high a valuation when closing inventory includes more low-cost goods than the average. Possibility of error. Experience of department stores. Danger of error less important than it appears. Relation of mark-downs to retail method. Objection on the score of clerical work.

THE advantages described in the previous chapter have been experienced in numerous department stores, both small and large, where the merchandise accounting has been placed completely on the retail basis. At the same time some firms, after giving consideration to the retail method, have pointed out certain objections which they feared might outweigh the admitted advantages.

The controller of one large department store, when asked why he did not use the complete retail method of inventory in closing his books instead of taking inventory at both cost and retail, said that he could reply in one word—inaccuracy. It has to be considered how far this contention is true and what the consequences are. It must be admitted at once that there is an inherent possibility of inaccuracy in the retail method because it is an averaging method.

RETAIL METHOD IS AN AVERAGING METHOD

As previously explained, the cost value of merchandise on hand at any time is arrived at by applying to the retail inventory figure a percentage which represents the mark-up. It is to be noted, however, that this percentage represents the average mark-up. It expresses a relation between the

total cost value of all merchandise handled to date and the total retail value of the same merchandise. Naturally, it is possible that some goods entering into these totals may bear a relatively high mark-up, others a relatively low mark-up. For example, the total percentage of mark-up on all merchandise handled during a season in a retail shoe store may be 30% of net sales. Yet some of the shoes included either in the inventory at the beginning of the period or in subsequent purchases may have carried a mark-up of 40%; while other goods, perhaps purchased for a special sales event, may have borne a mark-up of not more than 25%. The figure of 70%, the complement of 30%, represents the average cost of the total merchandise handled during the period; and this is the percentage that is applied to the retail inventory figure in order to arrive at a cost-or-market valuation. It is clear that if strict accuracy is to be had, the relative proportions of goods bearing a 40% mark-up and those bearing a 25% mark-up must be the same in the merchandise remaining on hand at the end of the period as in the total merchandise handled, from which the 30% average mark-up figure was derived. The difficulty arises from the possibility that in the stock of merchandise on hand when the cost percentage is applied to the retail inventory figure, the proportions of high mark-up and low mark-up goods may not be the same as they were in the totals from which the cost percentage was derived, since these totals include much merchandise that has been sold during the period and hence is no longer in the store. By way of illustration of this possible difficulty, a simple series of examples, similar to those used in the first part of Chapter III, again may be considered.

NO DIFFICULTY WHEN SAME PROPORTIONS OF HIGH MARK-UP
AND LOW MARK-UP GOODS ARE MAINTAINED

Table 10, page 67, shows for a suit department a case where no difficulty is encountered, because the same propor-

tions of high mark-up and low mark-up goods are maintained throughout. In the example shown in this table, the opening inventory comprises 50 suits purchased at a cost of \$20 each and placed on sale at a retail price of \$30 each. Thus the cost value of the opening inventory is \$1,000, and the retail value is \$1,500; the \$500 mark-up on the opening inventory represents a percentage of 33.33% of the selling price.

TABLE 10
CASE WHERE PROPORTIONS OF HIGH-COST AND LOW-COST
GOODS REMAIN UNCHANGED

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory	\$1,000	\$1,500	\$ 500	33.33%	66.67%
Purchases (freight included in cost) . .	1,500	2,000	500	25.00	75.00
Total of Inventory Plus Additions	2,500	3,500	1,000	28.57	71.43
Net Sales . . . . .	.....	1,750	.....	.....	.....
Retail Book Inventory	.....	1,750	.....	.....	.....

Cost Valuation of Inventory = 71.43% of \$1,750 = \$1,250.03

Merchandise	Number Suits	Cost Each	Retail Each	TOTAL	
				Cost	Retail
Opening Inventory	50	\$20.00	\$30.00	\$1,000	\$1,500
Purchases	100	15.00	20.00	1,500	2,000
Net Sales	25 50	..... .....	30.00 20.00	.....	1,750
Stock at End of Period	25 50	20.00 15.00	.....	1,250	.....

Total purchases during the period include 100 suits at a cost of \$15 each, and these suits are marked to sell at a retail price of \$20 each. Hence the total cost of purchases is \$1,500 and the total retail value of purchases is \$2,000; in this case the mark-up of \$500 represents 25% of the

selling price. As shown in the table, the total of the inventory plus additions amounts to \$2,500 at cost and \$3,500 at retail; and the relation between these two figures is expressed by the average mark-up percentage of 28.57% and its complement, the cost percentage of 71.43%.

During the period, sales are made of 25 suits at a retail price of \$30 each and 50 suits at a retail price of \$20 each. Total sales in dollars and cents thus amount to \$1,750, and this figure subtracted from the total retail figure of \$3,500 leaves a retail book inventory figure of \$1,750. When the cost percentage of 71.43% is applied to this retail book inventory figure, the resulting figure for the cost valuation of the inventory is \$1,250.03.

Since the unit records, however, show exactly what suits have been sold and what remain in stock, it also is possible on this basis to arrive at a figure for the cost of stock on hand at the end of the period. There were in all 50 suits with a retail price of \$30 each and 100 suits with a retail price of \$20 each. Since 25 suits have been sold at \$30 each and 50 suits have been sold at \$20 each, there must remain on hand 25 suits at a retail price of \$30 each and 50 suits at a retail price of \$20 each. Since the cost price of the suits marked to sell at \$30 is \$20, and similarly the cost price of the suits marked to sell at \$20 is \$15, the cost value of the stock at the end of the period amounts to \$500 plus \$750, or \$1,250, substantially the same as the figure of \$1,250.03 arrived at by the retail method.

In this case, there is no discrepancy between the cost value of the stock on hand at the end of the period as ascertained from actual stock records and the cost valuation as arrived at by the retail method, (the variation of \$0.03 may be explained by the fact that the decimals were carried only to the second place). The reason why there is no discrepancy lies in the fact that the proportions of high mark-up and low mark-up goods in the stock at the end of the period were the same as they were in the total stock figures from which the average cost percentage of 71.43%

was derived. The total of the inventory plus additions, amounting to \$2,500 at cost and \$3,500 at retail, comprised twice as many suits at a mark-up of 25% as there were suits bearing a mark-up of 33.33%. Similarly, twice as many suits were sold at a mark-up of 25% as were sold at a mark-up of 33.33%; and consequently the stock at the end of the period included twice as many suits at a mark-up of 25% as it did suits at a mark-up of 33.33%. Therefore, the average cost percentage of 71.43% was fully as representative of the stock at the end of the period as it was of the total stock of merchandise handled.

RETAIL METHOD GIVES TOO LOW A VALUATION WHEN CLOSING
INVENTORY INCLUDES MORE HIGH-COST GOODS
THAN THE AVERAGE

In the example in Table 11, page 70, a slightly different situation is assumed. So far as the application of the retail method is concerned, the figures remain the same as in Table 10; the retail book inventory is \$1,750, the cost percentage, 71.43%, and the cost valuation of the inventory, \$1,250.03. Likewise, the opening inventory consists of 50 suits at \$20 cost and \$30 retail, and total purchases include 100 suits at \$15 cost and \$20 retail.

The sales, though still amounting to \$1,750, differ in their make-up from the example in Table 10; 35 suits are sold at the retail price of \$30 each and also 35 suits at the retail price of \$20 each. Since there were originally 50 suits at \$20 cost and \$30 retail and 100 suits at \$15 cost and \$20 retail, it is easy to see that there must be in stock at the end of the period 15 suits at \$20 cost and \$30 retail and 65 suits at \$15 cost and \$20 retail. On this basis, therefore, the cost value of the stock at the end of the period amounts to \$300 plus \$975, or \$1,275. This figure, as may be seen at once, is approximately \$25 higher than the figure of \$1,250.03, which is the cost valuation of the inventory arrived at by the application of the retail method. If the

TABLE II

CASE WHERE CLOSING INVENTORY INCLUDES MORE HIGH-COST
GOODS THAN THE AVERAGE

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory....	\$1,000	\$1,500	\$ 500	33.33%	66.67%
Purchases (freight in- cluded in cost).....	1,500	2,000	500	25.00	75.00
Total Inventory Plus Additions.....	2,500	3,500	1,000	28.57	71.43
Net Sales.....	.....	1,750	.....	.....	.....
Retail Book Inventory	.....	1,750	.....	.....	.....

Cost Valuation of Inventory = 71.43% of \$1,750 = \$1,250.03

Merchandise	Number Suits	Cost Each	Retail Each	TOTAL	
				Cost	Retail
Opening Inventory....	50	\$20.00	\$30.00	\$1,000	\$1,500
Purchases.....	100	15.00	20.00	1,500	2,000
Net Sales.....	35	.....	30.00	.....	1,750
	35	.....	20.00		
Stock at End of Period	15	20.00	.....	1,275	.....
	65	15.00			

accuracy of the records is granted, there is no doubt that the correct cost figure is \$1,275, since this is based on actual stock records of units bought and sold. It follows that the figure arrived at by the retail method is approximately \$25 too low.

The cause of this discrepancy is not difficult to see. The cost percentage of 71.43% was based on total cost and retail figures which represented twice as many suits at a mark-up of 25% as there were suits at a mark-up of 33.33%; or to put it differently, there were twice as many suits with a cost of 75% as there were suits at a cost of 66.67%. This average cost percentage of 71.43% was applied to the retail book inventory of \$1,750; but, as

shown by the stock records, this inventory at the end of the period included only 15 suits at \$20 cost and \$30 retail, as compared with 65 suits at \$15 cost and \$25 retail. In other words, in the stock at the end of the period, there were more than four times as many suits with a mark-up of 25% as there were suits with a mark-up of 33.33%, or, expressed in the complementary cost percentages, more than four times as many suits at a cost of 75% as there were suits at a cost of 66.67%. Thus, although the average cost percentage of 71.43% was representative of the total merchandise handled, it was not representative of the stock at the end of the period, since that stock included a larger proportion of goods with a low mark-up (and consequently a high cost) than did the total stock figures from which the cost percentage of 71.43% was derived. The general principle may be stated as follows: if the stock at the end of the period has a larger proportion of low mark-up (higher cost) goods than the average, the resultant valuation figure secured by the retail method will be lower than the actual cost.

RETAIL METHOD GIVES TOO HIGH A VALUATION WHEN
CLOSING INVENTORY INCLUDES MORE LOW-COST
GOODS THAN THE AVERAGE

Exactly the opposite situation is illustrated by the example in Table 12, page 72. Here again the dollars-and-cents figures remain the same, and the average cost percentage of 71.43% applied to the retail book inventory of \$1,750 gives a figure of \$1,250.03 for the cost valuation of the inventory. Likewise, as in the two previous examples, the opening inventory consists of 50 suits at \$20 cost and \$30 retail; and total purchases include 100 suits at \$15 cost and \$20 retail. In this example, however, it is assumed that only 15 suits are sold at a retail price of \$30 each, as compared with 65 suits sold at a retail price of \$20 each. Consequently there are left in stock at the end of the period 35

THE RETAIL METHOD OF INVENTORY

TABLE 12

CASE WHERE CLOSING INVENTORY INCLUDES MORE LOW-COST
GOODS THAN THE AVERAGE

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory....	\$1,000	\$1,500	\$ 500	33.33%	66.67%
Purchases (freight in- cluded in cost).....	1,500	2,000	500	25.00	75.00
Total Inventory Plus Additions.....	2,500	3,500	1,000	28.57	71.43
Net Sales.....	.....	1,750	.....	.....	.....
Retail Book Inventory.....	.....	1,750	.....	.....	.....

Cost Valuation of Inventory = 71.43% of \$1,750 = \$1,250.03

Merchandise	Number Suits	Cost Each	Retail Each	TOTAL	
				Cost	Retail
Opening Inventory....	50	\$20.00	\$30.00	\$1,000	\$1,500
Purchases.....	100	15.00	20.00	1,500	2,000
Net Sales.....	15 65	..... .....	30.00 20.00	.....	1,750
Stock at End of Period	35 35	20.00 15.00	.....	1,225	.....

suits at a cost of \$20 each and also 35 suits at a cost of \$15 each. Thus the actual cost of the stock at the end of the period amounts to \$700 plus \$525, or \$1,225. This figure is approximately \$25 lower than the cost valuation figure of \$1,250.03 arrived at by means of the retail method; and if the stock records are correct, there can be no doubt that \$1,225 is the correct cost figure.

Again the reason for the discrepancy is clear. The average cost percentage of 71.43% represented the total stock, which included twice as many suits at a mark-up of 25% and a cost of 75% as there were suits at a mark-up of 33.33% and a cost of 66.67%. These same proportions of high-cost and low-cost goods, however, did not hold true

of the stock at the end of the period, which comprised the same number of suits at a mark-up of 25% as there were suits at a mark-up of 33.33%. Thus the closing stock included a greater proportion of high mark-up (low-cost) goods than did the total stock. Hence the actual cost figure was lower than the cost valuation figure shown by the retail method. The principle may be stated as follows: if the closing stock has a greater proportion of high mark-up (low-cost) goods than the average, the resultant valuation figure secured by the retail method will be higher than the actual cost.

POSSIBILITY OF ERROR

The examples just cited indicate a possibility of error that is inherent in the retail method of merchandise accounting because of the fact that it is an averaging method. In these two cases, in the cost valuation of an inventory, computed at \$1,250 by the retail method, there was an error of \$25, or 2%, either above or below the actual cost figure, depending on the relative proportions of high-cost and low-cost goods in stock at the end of the period as compared with the proportions of high-cost and low-cost goods in the total merchandise handled during the period. There can be no dispute as to the existence of this possibility of error. The real question is whether or not it constitutes a serious drawback to the retail method of merchandise accounting. There are some reasons for believing that it does not.

In the first place, it is well to bear in mind that the two examples illustrated in Tables 11 and 12 are hypothetical cases. In each case, wide variations were shown in the percentages of mark-up applied to different lots of merchandise, and also in the sales of these different lots of merchandise. In actual practice such wide variations would not be likely to occur; they were assumed in these fictitious cases in order to illustrate clearly the principles involved, and even so the resulting discrepancy was only 2% above or below actual cost.

EXPERIENCE OF DEPARTMENT STORES

It is interesting to turn from these examples to the actual situation that was found to exist when a departmentized specialty store in a New England city changed over to the retail method in 1921. In this store, where sales amounted to approximately \$2,500,000 annually, inventory previously had been taken at cost twice a year, at the end of each selling season. When it was decided to experiment with the retail method of merchandise accounting, inventory was taken, for purposes of comparison, at both cost and retail prices at the end of the spring season in 1921 and again in the same way at the end of the fall season. In both instances the cost valuation figure obtained by the retail method was only 0.4% higher than the depreciated cost inventory figure as ascertained by the usual cost method. In view of the fact that the discrepancy was small and apparently showed little tendency to vary, the executives of this store determined to adopt the complete retail method and to discontinue entirely the taking of inventory at cost, except at occasional intervals of two or three years, when a cost inventory might be taken for checking purposes.

It also has been the experience of several department stores that the possibility of error in the retail method can be minimized greatly if merchandise figures are segregated on a properly departmentized basis. If goods of different character, bearing different rates of mark-up, all are included in the same department and are lumped together in computing inventory, the liability of inaccuracy is increased considerably; but if each department includes only merchandise of a homogeneous character, all of which bears roughly the same percentage of mark-up, little difficulty ordinarily is experienced. For the proper segregation of merchandise figures it quite frequently is necessary to set up separate stock-ledgers for different sections within each department. In the silk department of a medium-sized department store, for example, separate stock-ledgers may

be operated for colored silks, black silks, and velvets; and in a coat and suit department separate ledgers may be maintained for women's coats, women's suits, women's skirts, women's stouts, and also misses' coats, misses' suits, and misses' skirts. For each of such divisions, stock-ledgers showing sales, purchases, and stocks at both cost and retail facilitate the satisfactory operation of the retail method. An even more important reason for the maintenance of such separate stock-ledgers, of course, is the assistance afforded in the control of stocks and the planning of sales and purchases. The use of the retail method, therefore, does not call for the maintenance of more completely segregated merchandise records than are essential for sound merchandise control in any event. In fact, it may be argued as one advantage of the retail method that it requires for best results the maintenance of a type of records well suited to the careful planning and control of merchandise operations.

DANGER OF ERROR LESS IMPORTANT THAN IT APPEARS

While experience shows that in well-departmentized retail businesses the danger of error in the use of the retail method is largely obviated, it is also true that this danger in any event is of less consequence than at first appears. As previously pointed out, one of the principal services of any type of book inventory is to provide at frequent intervals information permitting an operating statement to be drawn up that will reflect faithfully the condition of the profit and loss account. For this purpose it may be seriously questioned whether strictly accurate figures for the cost of merchandise remaining in stock and the cost of merchandise sold always are desirable. In consonance with the general principle that inventory should be valued at cost or market whichever is lower, it is clear that cost figures should not be used when market value is lower than cost; otherwise profits will be overstated. For the purpose of determining

profit under these conditions, what is needed is an accurate valuation figure; and, as brought out in the preceding chapter, such a figure most readily can be obtained by the use of the retail method. The possibility that the retail method will not show the actual cost of merchandise in stock, it follows, is of little importance under conditions of declining market values. By an extension of the same reasoning, it further may be questioned whether this possibility really is of any great importance in a constant or rising market. So far as concerns the retail dry-goods and garment and clothing business in general, and the department-store trade in particular, it must be borne in mind that the terms "rising market" and "falling market" have reference not so much to fluctuations in general business conditions and ups and downs of the general price level as to those changes that are occasioned by style and seasonal tendencies. At all times obsolescence is likely to be caused by style changes, and even apart from obsolescence on this account there are more or less regular declines in the value of seasonal merchandise at the end of each selling season, because of necessary changes in the weight and character of wearing apparel required for the fall season as compared with the spring season and vice versa. Furthermore, a store may become overstocked with certain goods, or it may find itself burdened with an accumulation of unsalable sizes; and under these circumstances the real worth of such goods to the store may be considerably less than the wholesale prices quoted for similar merchandise in the open market.

Thus it is fair to say that a retail dry-goods, wearing apparel, or department store practically always has some merchandise in stock that represents declining values. Hence, from the point of view of conservative store management, the principle that inventory should be valued at cost or market whichever is lower may be restated as follows: for the purpose of determining profit or loss, inventory should be valued at its real worth (in no case higher than actual cost) determined as accurately as possible on the

basis of records of past experience. Such a valuation is in effect what is given by the retail method when operated under favorable conditions. Viewed in this light, the objection that the retail method of inventory cannot be relied on always to reproduce accurately the original cost figures is by no means so serious a drawback as at first appeared to be the case.

RELATION OF MARK-DOWNS TO RETAIL METHOD

It is sometimes advanced as an objection to the retail method that its successful operation is largely dependent on the proper taking and correct recording of mark-downs. Mark-downs have been called the weak link in the retail plan of merchandise accounting. It is clear that if mark-downs are not taken when they should be, the retail book inventory figure will be too high, and, consequently, the cost valuation figure will not be conservative. In the past, some merchants have followed a policy of writing down the cost valuation of many articles of merchandise at inventory time, irrespective of whether the retail prices of those articles had been reduced, since there was no necessary relationship between retail price changes and depreciation. Under the retail method, however, depreciation really is taken by means of retail mark-downs. Consequently, it becomes especially important that retail mark-downs should not be deferred until after inventory time, but should be taken as promptly as they become necessary. This really is the most logical method of depreciation, since the worth of the merchandise to a store is in direct relation to the retail prices that can be secured for that merchandise. As soon as it becomes necessary to lower the retail prices in order to make sales, the worth of the merchandise to the store is thereby lowered, and it is desirable that this depreciation should be registered at once.

The experience of many department stores during the period of business depression that began in 1920 indicates

that the best policy ordinarily is to take losses as promptly as possible, rather than to defer price reductions with the idea of escaping losses by liquidating stocks at a more leisurely rate. Since the prompt taking of mark-downs is desirable from the standpoint of a sound merchandising policy, the objection cited against the retail method on the score of mark-downs may with equal justice be reversed into an argument in its favor. It may be argued that the retail method, by emphasizing the necessity of taking all mark-downs promptly, is a means of securing more effective management.

Not all mark-downs represent changes in the replacement values of merchandise, but under the retail method all mark-downs affect the cost valuation of the inventory. Reductions in retail prices may be necessitated because of competitive reasons, or because of an accumulation of overstocks or partly broken runs of sizes. Mark-downs made for these reasons, it has been contended, are likely to result in an inventory cost valuation figure that does not correspond with market value. Again it is necessary to be reminded that, for the purpose of reflecting faithfully the real condition of the profit and loss account, what is needed is a figure representing the real worth (in no case higher than cost) of the merchandise to the store. Such a figure is not necessarily either the market valuation figure, although it may closely approximate it, or the actual cost figure. From this reasoning, it is clear that all legitimate mark-downs for whatever cause should affect the cost valuation of the merchandise in an inventory.

It also has been pointed out that if there is any failure to record mark-downs correctly, the operation of the retail plan of merchandise accounting will be seriously interfered with. This is true, but why should not mark-downs be accurately recorded? Many small retail firms, of course, do not keep any records of mark-downs, since such records are not essential to the accurate determination of profit or loss, provided the firms are content to determine profit

or loss only at such times as actual inventories are taken. It is safe to say that a goodly number of these firms, nevertheless, could plan sales, stocks, and purchases with better results, mark their merchandise more intelligently, and reduce the number and amount of mark-downs if they did keep a record of all price reductions. The importance of mark-downs in the department-store field is indicated by the following excerpts from one of the bulletins of the Harvard Bureau of Business Research for the year 1923.

A supplementary inquiry was made on mark-downs in 1923. Only 85 of the 403 firms with sales below \$1,000,000 responded to this inquiry. For these firms, the common figure for mark-downs was 6% of net sales, or \$15,960 for a typical firm with sales of \$266,000. This figure did not include any shrinkage allowances, stock shortages, or special discounts. Although the percentage of mark-downs, following the common practice in making comparisons, was computed on the basis of net sales as 100%, this, of course, does not mean that in any case the amount of mark-downs actually was included in the net sales figure. In this group, 23 firms reported mark-downs of less than 4% of net sales, but there were 18 firms that had mark-downs amounting to more than 10% of net sales. From such evidence as was available, it appears that the ratio for mark-downs was lower for the firms with sales under \$250,000 than for those with sales over that figure.¹

. . . . 93 of the 163 firms with sales of \$1,000,000 and over reported the amount of mark-downs. For these firms the common figure for mark-downs was 7% of net sales, or \$161,000 for a typical firm with sales of \$2,300,000. . . . In this group, 13 firms reported mark-downs amounting to more than 10% of net sales, and there were only 4 instances of mark-downs amounting to less than 4% of net sales. Within the group of firms with sales of \$1,000,000 and over there was no evidence to show that the ratio of mark-downs varied according to the volume of sales, nor was there any indication that mark-downs were larger in relation to sales volume for firms in any one section of the United States as compared with those in other sections.

The readjustments of retail prices represented by mark-downs are in the main an inescapable part of the department-store business. In some years mark-downs reflect declining price levels and

¹Bureau of Business Research, Harvard University, *Bulletin Number 44*, "Operating Expenses in Department Stores in 1923," page 17.

are a part of the broad movement of general business conditions.

Aside from such periods of unsettled business, however, the ever present seasonal and style factors cause many mark-downs, while others result, of course, purely from misjudgment of demand. In guarding against losses from excessive mark-downs, successfully managed department-store firms rely primarily on rapidity of stock-turn, careful planning of sales, stocks, and purchases on the basis of records of previous experience, and intelligent interpretation of consumers' buying motives throughout the processes of purchasing and sales promotion.¹

Sixteen of these 41 specialty-store firms answered the supplementary inquiry in regard to mark-downs in 1923. For these 16 firms the typical figure for mark-downs was 9.4% of net sales. . . . Three firms reported mark-downs amounting to more than 18% of net sales, and there was only one instance of mark-downs amounting to less than 5% of net sales. In view of the fact that specialty stores for the most part deal exclusively in women's wearing apparel, it is not surprising that their ratio of mark-downs is relatively high. Such merchandise is peculiarly subject to rapid style changes, and prompt price reductions are essential to prevent the accumulation of goods obsolete in style.²

These data indicate that mark-downs are too important a feature to be neglected, especially in large retail businesses. From this point of view, the dependence of the retail method on the proper recording of mark-downs is a virtue rather than a defect. If mark-downs constitute a weak spot in the merchandise-control system of any store, they will constitute a weak spot in the operation of the retail method in that store; but the attempt to operate the retail method in itself will tend to remedy the weakness.

OBJECTION ON THE SCORE OF CLERICAL WORK

A further objection to the retail method is that its use entails too much clerical work. In the case of retail stores making annual sales of \$500,000 or more, the strength of this argument may be questioned. Such firms find it neces-

¹Bureau of Business Research, Harvard University, *Bulletin Number 44*, "Operating Expenses in Department Stores in 1923," pp. 56, 57.

²*Ibid.*, pp. 100, 101.

sary in any event to undertake a considerable volume of clerical work for the purpose of maintaining control of their merchandise operations. For these firms, it is logical to suppose that any slight increase in clerical work necessitated by the use of the retail method is more than offset by the greater speed and ease of taking and recording physical inventories. In instances where the retail method has been substituted for the cost-audit plan, the results indicate, if anything, a reduction in clerical expense. In the case of retail establishments with relatively small sales volume, however, it is frequently true that only meager records are kept. Merchandise figures are imperfectly departmentized, if, indeed, this is attempted at all; mark-downs are not recorded; no book inventory figures are maintained; and shortages and depreciation are absorbed by neglect. Many such stores are perhaps small enough not to require more elaborate records; and for these firms it is undoubtedly true that the adoption of the retail method of merchandise accounting would mean a very considerable increase in the volume of clerical work.

Thus the three principal objections that have been advanced against the retail method are: (1) the inherent possibility of error, (2) the dependence on the proper taking and recording of mark-downs, and (3) the necessity of a considerable volume of clerical work. Of these three difficulties, the first, while always present, is not so serious a drawback as might be thought; the second is really a virtue rather than a defect of the retail method; and the third is of importance only for businesses with such small sales volume as not to necessitate the maintenance of detailed records for management purposes.

VI

PROBLEMS ENCOUNTERED IN OPERATION

Difficulty encountered in changing from cost to retail method. Possibility of higher inventory valuation by retail method. Principal difficulty removed by ruling of Treasury Department early in 1923. Problem presented by special sales events. Monthly basis versus seasonal or yearly basis. Which figure is right? Question whether simultaneous general stock-taking is necessary under retail method. The educational problem.

IN applying the retail method of inventory as a means of merchandise control, department stores commonly have encountered certain problems, which arise, for the most part, out of one of the characteristic features of the method pointed out in the preceding chapter, namely, the fact that it is essentially an averaging method.

As previously pointed out, department-store firms have experienced difficulty in reconciling the inventory and profit figures resulting from the retail method with those obtained by the cost method for the period in which the change of method took place. In undertaking to install the retail plan, it is necessary that inventory be taken at retail and stock-ledgers opened on a retail basis at the beginning of some fiscal period. At the same time, it also is necessary to take the inventory on the cost basis in order to close the books for the preceding period, in which the cost method was in use. In making the change in this way, the experience of a number of department stores has been that the inventory valuation figure arrived at by the retail method commonly did not tally exactly with the inventory valuation figure as determined by the cost method. Consequently, two different net profit figures resulted. If the cost of merchandise on hand amounted to \$990,000 under the retail method as compared with a valuation of \$980,000 under the cost

method, the net profit figure according to the retail method naturally was \$10,000 higher than the net profit shown by the inventory method previously in use. Apparently this \$10,000 had to be shown as a profit either of the preceding period or of the current period. According to the federal income tax regulations, as they stood up to March, 1923, it seemingly was necessary for a firm changing from the cost to the retail method to pay taxes on such increased book profits, if shown.

POSSIBILITY OF HIGHER INVENTORY VALUATION BY RETAIL METHOD

Tests in a considerable number of department stores led the executives to believe that the inventory valuations as determined by the retail method tended to be slightly higher than the inventory figures arrived at under the cost method. These firms, consequently, hesitated to adopt the complete retail method, because it appeared that for the period in which the change was made they would be taxed on unrealized profits. This experience was by no means universal among firms which were experimenting with the retail method during 1920 and 1921. In some instances, the discrepancies found were negligible; in others, the retail method resulted in inventory valuations that were slightly lower than those obtained under the cost plan. The consensus of opinion among department-store executives, however, was that slightly higher inventory valuations ordinarily might be expected to result from the retail plan. The explanation advanced was that a closing inventory tended to include a greater proportion of high mark-up (low-cost) goods than did the total stock handled during the period. Customers, it was asserted, recognized good values. For example, if the cost of one dress amounted to 70% of the selling price, whereas the cost of another almost similar dress amounted to 80% of the selling price, it was alleged that experienced shoppers were quick to recognize the

greater bargain offered by the second dress. Consequently, if a firm handled 500 of each of the dresses during a selling season, it might be expected that in the closing inventory there would be found more dresses with a 70% cost and 30% mark-up than there would be dresses with an 80% cost and 20% mark-up. As pointed out on page 73 of Chapter V, such a situation causes the inventory valuation figure secured by the retail method to be higher than the actual cost.

PRINCIPAL DIFFICULTY REMOVED BY RULING OF TREASURY
DEPARTMENT EARLY IN 1923

As soon as a firm had adopted the retail method and applied it over a complete fiscal period, it was recognized, of course, that the effects on net profit of these slightly higher inventory valuations would be largely negligible, since the degree of error, if it may be termed that, presumably would be more or less constant from year to year. The principal difficulty, therefore, related to the period in which the change of inventory method took place. During 1921 and 1922, various accounting devices were suggested to enable department-store firms to change from the cost to the retail method and at the same time avoid paying taxes on unrealized profits. Fortunately, however, this apparent obstacle to the wide-spread use of the retail method of merchandise accounting was removed by Income Tax Mimeo-graph 3077, published on March 23, 1923. This ruling in part reads as follows:

It is recognized that where, in changing from the cost method of computing inventories to the retail method, the opening inventory is not computed at retail, a book profit results for the year in which the change is made which is clearly not income realized from operations, or gain within the meaning of the Revenue Acts and which need not therefore be included in the income for the year, provided the taxpayer has kept accurate records showing such unrealized income and in filing the return the items are clearly set up in a rider attached to the return.

Although this ruling has paved the way for the adoption of the retail method by a number of department stores that previously hesitated to make the change, two problems still persist, arising from the same general causes as the difficulty encountered in changing from the cost to the retail method.

PROBLEM PRESENTED BY SPECIAL SALES EVENTS

The first of these problems occurs in connection with special sales events. During the course of the season, it is by no means uncommon for several lots of merchandise to be purchased and offered at special prices for limited periods. Goods specially purchased for such sales events commonly bear a considerably lower mark-up than the average rate for the department. Frequently, also, such special lots of merchandise are disposed of almost entirely during the course of the particular sales event. Where this takes place in a department operated on the complete retail basis, inflated inventory valuation figures are likely to result.

This difficulty may be illustrated by the following example. At the beginning of the spring season in a coat department, there are in stock in one division 60 coats at a cost price of \$30 each and a retail price of \$45 each, making a total of \$1,800 at cost and \$2,700 at retail. Subsequently, there are purchased 120 coats at \$35 cost and \$50 retail, the cost and retail figures totaling respectively \$4,200 and \$6,000. Also there is purchased for a special sales event a lot of 50 coats at \$20 cost and \$25 retail, the respective cost and retail totals being \$1,000 and \$1,250. During the season sales amount to \$7,050; this total includes 40 coats sold at \$45 each, 80 coats sold at \$50 each, and 50 coats sold at \$25 each. At the end of the season, therefore, the stock on hand in this division comprises 20 coats at a cost of \$30 each and 40 coats at a cost of \$35 each, the lot of 50 coats at \$20 cost and \$25 retail having been disposed of completely during the special sales event.

Since at the end of the season there are in stock 20 coats at a cost of \$30 each and 40 coats at a cost of \$35 each, the total cost value of the inventory in this division of the coat department is \$2,000. Computations made on the retail inventory basis, however, result in a figure of \$2,040.15 for the cost valuation of the inventory. These figures are shown in Table 13, below.

TABLE 13
POSSIBLE EFFECT OF SPECIAL SALES EVENTS ON
RETAIL METHOD

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory	\$1,800	\$2,700	\$ 900	33.33%	66.67%
Purchases (freight included in cost)	4,200	6,000	1,800	30.00	70.00
	1,000	1,250	250	20.00	80.00
Total Inventory Plus Additions	7,000	9,950	2,950	29.65	70.35
Net Sales		7,050			
Retail Book Inventory		2,900			

Cost Valuation of Inventory = 70.35% of \$2,900 = \$2,040.15

Merchandise	Number of Coats	Cost Each	Retail Each	TOTAL	
				Cost	Retail
Opening Inventory	60	\$30.00	\$45.00	\$1,800	\$2,700
Purchases	120	35.00	50.00	4,200	6,000
	50	20.00	25.00	1,000	1,250
Net Sales	40		45.00		1,800
	80		50.00		4,000
	50		25.00		1,250
Stock at End of Period	20	30.00		2,000	
	40	35.00			

It is apparent that the difficulty in this case is the same as that illustrated in Table 12, Chapter V, page 72. The high-cost (low mark-up) goods sold in the special sale had the effect under the retail method of inflating the inven-

tory valuation by approximately \$40. As shown by Table 13, this lot of 50 coats bearing the low mark-up of 20% entered into the totals from which was derived the cost percentage of 70.35%; and this cost percentage, when applied to the retail book inventory, \$2,900, resulted in the cost valuation figure of \$2,040.15. Yet, as shown by the stock records, none of these 50 coats was in the inventory at the end of the period.

Although the amount of variation shown in the example in Table 13 is not large, it is evident that some difficulty might be caused in departments where it is the common practice several times during a season to hold sales events involving specially-bought and specially-priced merchandise. The problem naturally does not arise in the case of goods marked down for a special sales event; nor are the consequences particularly noticeable unless practically all the specially-bought, specially-priced goods are disposed of before the inventory is taken. In some department stores where this difficulty first was encountered, one possible method of evasion was suggested, namely, that merchandise bought for a special sales event originally should be given the same mark-up as that borne by other merchandise in the same department and then should be marked down to the desired point. For example, if it was intended to hold a special sale of hosiery at a 20% mark-up, the merchandise bought for this occasion might be originally marked up 33 1/3% to conform with the normal mark-up percentage in that department; and immediately thereafter mark-downs would be taken to lower the mark-up on this particular merchandise to 20%.

This plan had some obvious disadvantages. In effect, it amounted to juggling the mark-up and mark-down records so that they did not tell a true story. There was doubt, furthermore, whether this device would be acceptable to the federal income tax authorities. For these reasons, this plan did not come into general use.

In instances where the value of merchandise purchased

for special low mark-up sales is small in comparison with the total value of merchandise handled in a department, the common practice apparently is to neglect the possibility of inflating inventory valuation under the retail method. But where the proportions of such specially-bought, specially-priced merchandise are large, the safest procedure is to open an entirely separate division of the stock-ledger for such merchandise, and to accumulate therein figures on stocks, purchases, and sales of such goods separate from the merchandise records of other goods in the department. This plan involves some extra clerical work, but special sales events always involve some extra work. In fact, some firms are disposed to regard the difficulty that has just been described as an additional argument against the policy of holding special sales events. Not only are such special sales events likely to entail some additional expenses for buying, receiving, selling, and control, but they not infrequently involve the sale of merchandise at a mark-up lower than the average cost of doing business. In addition, they interfere to a certain extent with the planning of sales, stocks, and purchases; and eventually may result in the accumulation of odds and ends of merchandise that retard the rate of stock-turn and necessitate additional mark-downs. Such special sales events customarily have been considered necessary for the purpose of securing additional sales volume, in the belief that large sales volume was in itself a source of lower operating expense ratios. Now that the accumulation of reliable expense data is tending to disprove this widely accepted theory, the value of special sales events is beginning to be questioned in some quarters.

MONTHLY BASIS VERSUS SEASONAL OR YEARLY BASIS

A second problem arising from the fact that the retail plan of merchandise accounting is essentially an averaging method comes to light when the question is raised as to exactly what figures are to be used at the end of the fiscal

period in arriving at the cost valuation of the inventory in order to determine profit or loss. A logical procedure, obviously, is to start with the inventory at the beginning of the fiscal period at both cost and retail and to add all the purchases and additional mark-ups during the entire fiscal period. In this way, cost and retail totals are obtained for all merchandise handled by a department during the entire fiscal period; and from these totals may be derived the cost percentage to be applied to the retail book inventory for the purpose of arriving at the cost valuation figure. There also is another method of procedure, however. As previously pointed out, business firms commonly wish to ascertain at frequent intervals the condition of the profit and loss account; and it is one of the advantages of the retail method that profits can be determined as frequently as desired without the necessity of taking a physical inventory. Each month, therefore, or even more frequently, the retail method may be used to determine the cost valuation of the merchandise on hand, the cost of merchandise sold, and the amount of gross margin realized. If this is done at the end of the first month of the season, the inventory valuation figure thus obtained may be used as the starting point of a similar computation for that department at the end of the second month, and so on throughout the year or season. Then at the end of the fiscal period, in the final computation of inventory valuation, the inventory figures used as a starting point may be those derived from the computation at the end of the preceding month rather than the inventory figures for the beginning of the fiscal period, six months or a year previously.

It might be supposed that these two methods of procedure would produce identically the same result, but such is not the case. This curious discrepancy may be illustrated by the example carried through in Tables 14 to 20 inclusive, pages 90 to 93. In this example, for the sake of simplicity, additional mark-ups, mark-downs, and stock shortages are left out of account.

THE RETAIL METHOD OF INVENTORY

TABLE 14
FIRST MONTH OF SEASON

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory	\$8,000	\$12,000	\$4,000	33.33%	66.67%
Purchases (freight included in cost)	5,000	8,000	3,000	37.50	62.50
Total of Inventory Plus Additions	13,000	20,000	7,000	35.00	65.00
Net Sales		4,500			
Retail Book Inventory		15,500			

Cost Valuation of Inventory = 65% of \$15,500 = \$10,075

At the beginning of the season, there was on hand in this particular department merchandise amounting to \$8,000 at cost and \$12,000 at retail. During the first month, purchases were made to the amount of \$5,000 at cost and \$8,000 at retail, while net sales totaled \$4,500. As shown in Table 14, the retail book inventory at the end of the first month was \$15,500, and the cost valuation of this inventory was \$10,075. Table 15 shows figures for the second

TABLE 15
SECOND MONTH OF SEASON

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory . . .	\$10,075	\$15,500	\$5,425	35.00%	65.00%
Purchases (freight included in cost)	8,000	11,000	3,000	27.27	72.73
Total of Inventory Plus Additions	18,075	26,500	8,425	31.79	68.21
Net Sales		7,000			
Retail Book Inventory		19,500			

Cost Valuation of Inventory = 68.21% of \$19,500 = \$13,301

TABLE 16
THIRD MONTH OF SEASON

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory	\$13,301	\$19,500	\$6,199	31.79%	68.21%
Purchases (freight included in cost)	6,000	8,200	2,200	26.80	73.20
Total of Inventory Plus Additions	19,301	27,700	8,399	30.32	69.68
Net Sales		9,500			
Retail Book Inventory		18,200			

Cost Valuation of Inventory = 69.68% of \$18,200 = \$12,682

month of the season. At the beginning of this month, the opening inventory naturally was the same as that shown for the close of the preceding month, that is, \$10,075 at cost and \$15,500 at retail. During this second month of the season, purchases amounted to \$8,000 at cost and \$11,000 at retail, and net sales totaled \$7,000. Consequently, at the end of the month the merchandise on hand amounted to \$19,500 at retail and \$13,301 at cost. Similarly Table

TABLE 17
FOURTH MONTH OF SEASON

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory	\$12,682	\$18,200	\$5,518	30.32%	69.68%
Purchases (freight included in cost)	4,500	6,000	1,500	25.00	75.00
Total of Inventory Plus Additions	17,182	24,200	7,018	29.00	71.00
Net Sales		10,000			
Retail Book Inventory		14,200			

Cost Valuation of Inventory = 71% of \$14,200 =

TABLE 18
FIFTH MONTH OF SEASON

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory . . .	\$10,082	\$14,200	\$4,118	29.00%	71.00%
Purchases (freight included in cost)	3,200	4,000	800	20.00	80.00
Total of Inventory Plus Additions	13,282	18,200	4,918	27.02	72.98
Net Sales		6,000			
Retail Book Inventory		12,200			

Cost Valuation of Inventory = 72.98% of \$12,200 = \$8,904

16 presents figures for the third month of the season; Table 17 for the fourth month of the season; Table 18 for the fifth month of the season; and Table 19 for the sixth month of the season. As illustrated in Table 19, the opening inventory at the beginning of the sixth month was \$8,904 at cost and \$12,200 at retail, these figures being the same as those shown in Table 18 for the close of the fifth month. During the sixth month, purchases amounted

TABLE 19
SIXTH MONTH OF SEASON

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory . . .	\$8,904	\$12,200	\$3,296	27.02%	72.98%
Purchases (freight included in cost)	900	1,200	300	25.00	75.00
Total of Inventory Plus Additions	9,804	13,400	3,596	26.84	73.16
Net Sales		3,200			
Retail Book Inventory		10,200			

Cost Valuation of Inventory = 73.16% of \$10,200 =

TABLE 20
TOTAL SEASON

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory . . .	\$8,000	\$12,000	\$4,000	33.33%	66.67%
Purchases (freight included in cost)	5,000	8,000	3,000	37.50	62.50
	8,000	11,000	3,000	27.27	72.73
	6,000	8,200	2,200	26.80	73.20
	4,500	6,000	1,500	25.00	75.00
	3,200	4,000	800	20.00	80.00
	900	1,200	300	25.00	75.00
Total of Inventory Plus Additions	35,600	50,400	14,800	29.37	70.63
Net Sales . . . . .	.....	40,200	.....	.....	.....
Retail Book Inventory	.....	10,200	.....	.....	.....

Cost Valuation of Inventory = 70.63% of \$10,200 = \$7,204

to \$900 at cost and \$1,200 at retail, while the net sales were \$3,200. Thus the retail book inventory for this department at the end of the season is \$10,200 and the cost valuation of this inventory according to the retail method appears to be \$7,462.

When the same figures are combined in a single calculation for the entire season, according to the retail method, the result, as shown in Table 20, is not the same. The computation in this table begins with the opening inventory of \$8,000 at cost and \$12,000 at retail, the same figures as those used in Table 14. The six sets of purchase figures appearing in Table 20 are identical with the purchase figures in Tables 14 to 19 inclusive; and similarly the sales figure of \$40,200 in Table 20 is the total of the sales figures in the tables for the separate months. Consequently, the retail book inventory figure shown for the close of the season in Table 20 is the same as that appearing in Table 19, namely, \$10,200. Yet the figure appearing in Table 20 for the cost valuation of the inventory is \$7,204 as com-

pared with the figure of \$7,462 in Table 19, a discrepancy of \$258. Evidently the combination of all the cost and retail figures in a single calculation has resulted in a cost percentage that is lower than the cost percentage shown for the end of the sixth month as a result of carrying forward the inventory valuation figures for each month.

The figures in Table 20 indicate that a higher percentage of mark-up was borne by the goods on hand and by those purchased near the beginning of the season than by the goods purchased towards the close of the season. For instance, the mark-up on the opening inventory was 33.33%, and the purchases during the first month bore an original mark-up of 37.50%. On merchandise purchased during the last three months of the season, however, the original mark-up was not higher than 25%. Thus the cost percentages, which are the complement of the mark-up percentages, were relatively low at the beginning of the season. In Table 20, the average cost percentage applied to the retail book inventory of \$10,200 was 70.63%, as compared with the corresponding figure of 73.16% shown in Table 19. It is evident, therefore, that the higher cost percentages for the last three months of the season were given more weight when the calculations were made separately for each month than when the figures for the entire season were combined in a single computation. To state the same thing the other way around, the use of the single calculation for the entire season gave more weight to the relatively low cost percentages for the first three months than did the cumulative series of separate calculations for each month.

WHICH FIGURE IS RIGHT?

Is the cost valuation of the inventory at the end of the season better represented by the figure of \$7,462 appearing in Table 19 or that of \$7,204 appearing in Table 20? From an inspection of the figures, it is evident that the stock in this department was turned approximately 2.8

times during the season (net sales of \$40,200 divided by the average retail inventory of \$14,543). It might be regarded as a fair assumption, therefore, that at the end of the season there was comparatively little merchandise in stock that had been on hand at the beginning of the season or that had been purchased during the first two months. It might be reasoned, in consequence, that the method of separate monthly calculations results in a more accurate inventory valuation figure, since it gives less effect to the merchandise handled near the beginning of the season than does the method of making a single calculation for the entire season. Why should the mark-up borne by merchandise that is no longer in stock be allowed to affect the cost valuation of the inventory at the end of the period?

Apparently, nevertheless, the common practice among department stores and departmentized specialty stores is to use the single calculation method in closing their books for the determination of profit. For one thing, this procedure apparently is required by the present wording of the federal income tax regulations. Income Tax Mimeograph Number 3077 reads in part as follows:

Under the retail method the goods in the inventory are ordinarily priced at the selling prices, and the total retail value of the goods is reduced to approximate cost by deducting the percentage which represents the difference between the retail selling value and the purchase price. In order to compute this percentage properly, goods should be recorded by departments at two prices: (a) invoice price plus transportation, and (b) original retail price. The total purchase mark-up for the accounting period is the difference between

Cost: Inventory at the beginning of the period
 Purchases at cost
 Transportation
 and

Retail: Inventory at sales price
 Purchases at sales price

This total mark-up, divided by the total retail value, gives the percentage of purchase mark-up.¹

¹Income Tax Mimeograph Number 3077 is given in full in the Appendix.

There seems to be little possibility of construing this section other than as requiring the use of a single computation for the entire accounting period for the purpose of determining inventory valuation under the retail method.

It must be recognized also that in actual practice the discrepancy ordinarily would not be so great as that shown in the case illustrated. The assumed figures used in the example exhibited somewhat greater variations in mark-up percentages during the season than ordinarily might be expected; and these variations, it is clear, were primarily responsible for the difference shown between the inventory valuation figures under the two methods. It nevertheless may be desirable for firms to continue experimenting with computations according to both methods, with a view to seeking changes in the language of the federal income tax requirements should this step ultimately appear desirable.

QUESTION WHETHER SIMULTANEOUS GENERAL STOCK-TAKING IS NECESSARY UNDER RETAIL METHOD

Another problem that has presented itself to the executives in stores using the retail method is whether the physical inventory need be taken simultaneously in all departments, or whether it is feasible to take inventory piecemeal, one department at a time. Since an inventory valuation figure is necessary in order that the books may be closed and the profit or loss determined, the customary procedure in all mercantile businesses naturally has been to take a physical inventory simultaneously throughout all departments; and this undoubtedly remains the prevailing practice in most retail stores. Where no method exists of determining the cost of goods sold other than by taking a physical inventory, it is clear that there is no escape from the plan of simultaneous general stock-taking throughout the business. In cases where supplementary methods are in use, however, for the determination of cost of merchandise sold,

the question is pertinent whether, under some circumstances, book inventory figures rather than physical inventory figures may not be used for the annual or semiannual determination of profit. If such book inventory figures are obtained by a cost audit of sales, as explained in Chapter IV, it is clear that they cannot safely be used to close the books for the purpose of making tax returns, because they leave out of account the important element of depreciation on goods remaining in stock. The use of these figures, instead of valuation figures arrived at by a properly depreciated physical inventory, would almost surely result in a fictitiously inflated profit figure.

But since the retail method, as explained in Chapter IV, automatically makes allowance for the depreciation on merchandise remaining in stock, the book figures for inventory valuation secured by this plan, some department-store executives believe, can safely be used in closing the books for the annual or semiannual determination of profit or loss. Under such a procedure, the only element not taken into consideration is that of stock shortages; the retail book inventory figure, in other words, may be higher than the retail value of the goods on hand as disclosed by a physical inventory. Thus, a cost valuation figure derived from a retail book inventory uncorrected for stock shortages may result in a slight overstatement of profit.

Taking a physical inventory simultaneously in all departments of a large retail business is a task of considerable magnitude. Careful planning and preparation are necessary, and ordinarily overtime work is required. The actual work of stock-taking often must be done under pressure, with consequent likelihood of errors necessitating laborious rechecking. On the other hand, if book figures can be used for closing so that it is not essential to have a simultaneous physical inventory throughout all departments, stock may be taken one department at a time during selling hours by a special crew, or by the salespeople at a time when business is slack. By this arrangement, times may be selected

when stocks in a department are relatively low. Also, there is much less confusion and less likelihood of error when physical inventories are taken in this way. Under this plan, the taking of inventory becomes primarily a means of stock control. In some departments it may be desirable to take stock once a month or even once a week, especially if each physical inventory reveals a considerable stock shortage; in others, quarterly or semiannual inventories may suffice. Whenever a physical inventory is taken, of course, the stock-ledgers will be corrected for stock shortages.

Although the use of book inventory figures for semiannual closing has been found successful by a number of firms, including several departmentized specialty stores, numerous department-store firms employing the retail method continue to adhere to the plan of simultaneous general stock-taking because they fear that otherwise their profit figures will be overstated. The piecemeal physical inventory plan undoubtedly has much to recommend it, but then the likelihood must be admitted that in certain departments stock shortages that had developed since the most recent physical inventory might prove a seriously disturbing factor. Therefore, the question of piecemeal stock-taking as opposed to simultaneous general stock-taking is one that each firm using the retail method will have to decide on the basis of its own experience. In one case, for instance, a specialty store's experience has shown that the results are satisfactory provided stock is taken in each department at some time not more than 30 days prior to the end of the fiscal period. Several firms also assert that they have been able to solve the problem satisfactorily through the creation of reserves against stock shortages. In any event, the use of the retail method makes the piecemeal plan of stock-taking at least a possibility, and where this procedure is feasible there are obvious advantages to be gained. The propriety of using book figures to determine taxable income is recognized by the federal tax regulations.

THE EDUCATIONAL PROBLEM

In considering the problems encountered in the use of the retail method, mention must be made of the educational problem. From what has been said of the retail plan in the preceding chapters, it is clear that any firm undertaking to install this method of merchandise accounting must assume an educational task of some magnitude in developing in its department heads and other executives a thorough understanding of the principles of the method and the correct procedure in operating it. Where buyers have been accustomed to dealing primarily with cost figures rather than retail figures, it may not be easy to make them understand what the retail plan accomplishes. In fact, the merchandise executives of several department stores state that the principal problem they encountered in changing from the cost to the retail method was this one of education and training.

Although it may require time and painstaking effort to develop a thorough understanding of the retail method among the buyers and other executives and employees whose work is affected by it, it has been the experience of more than one firm that these efforts are more than repaid by the results of the training. The use of the retail method leads buyers to think in terms of selling-price figures rather than cost figures exclusively. As the designation "buyer" itself indicates, department heads in the past commonly have been inclined to regard buying as the most important part of their duties. In some respects, this emphasis on buying has constituted a weakness in the organization of many department stores, and during recent years the tendency has been to shift the emphasis to the side of sales planning and sales promotion. As pointed out in an earlier chapter, the use of the retail method in itself is a part of the growing tendency to place the emphasis on selling rather than on buying, and to think in terms of what the merchandise can be sold for rather than in terms of what it was

bought for. Therefore, training in the principles of the retail method is likely to assist in the development of a broader outlook and a better understanding of modern merchandising.

VII

ROUTINE OPERATION—NECESSARY FORMS

Essential figures to be accumulated for each department. Stock-ledger. Invoice record and purchase book. Mark-up and mark-down records. Net sales figures complete data required for stock-ledger. Inward transportation charges. Cash discounts—are they a capital earning or a merchandise earning? Relation of cash discounts to the retail method. Loading. Effect of loading on the retail method. Some departments in which retail method cannot be used. Case of variably priced articles. Figuring stock-turn under the retail method.

IN department stores, the routine operation of the retail plan of merchandise accounting requires that certain merchandise figures be accumulated separately for each selling department, or stock division in cases where it is necessary to subdivide departments. As previously indicated, the essential merchandise figures are the following: inventory at cost and retail, purchases at cost and retail, net additional mark-ups at retail, net mark-downs at retail, and net sales at retail.

STOCK-LEDGER

It is becoming customary to accumulate these figures for each department on a form of record commonly known as a stock-ledger. A typical stock-ledger sheet is shown in Form 1, page 102.¹ At the beginning of a season the inventory figures at cost and retail are entered on this form. The retail figures, of course, are those ascertained by the physical inventory, while the cost figures are those arrived at for the close of the preceding season by the retail method. During the season, naturally, cost and retail inventory figures may be entered as often as desired, since these

¹The forms used in this chapter are reproduced by permission of the F. T. Slattery Company, Boston, Massachusetts.

Line Number	Inventories				Purchases			Inventory—Plus Additions				Sales		Total Inventory		Inventory Adjustments	
	Cost	Retail	Average Stock	Turn-Over	Cost	Merchandise Discount Loading	Freight and Express Inward	Retail	Additional Mark-Up Net	Cost	Retail	Mark-Up	% Mark-Up	Cost	Retail	Cost	Retail
1	Inventory																
2	To Date																
3	To Date																
4	To Date																
5	To Date																
6	To Date																
7	To Date																
8	To Date																
9	To Date																
10	To Date																
11	To Date																
12	To Date																
13	To Date																
14	To Date																
15	To Date																
16	To Date																
17	To Date																
18	To Date																
19	To Date																
20	To Date																
21	To Date																
22	To Date																
23	To Date																
24	To Date																
25	To Date																

Form 1: Stock-Ledger Sheet

figures can be obtained by simple arithmetic without the necessity of a physical inventory. The stock-ledger page shown in Form 1 also provides incidentally for average stock and turnover figures.

INVOICE RECORD AND PURCHASE BOOK

The purchase figures required for the stock-ledger sheet are obtained originally from the invoices. When merchandise is received, it is the common practice to record the invoices on an invoice record such as that shown in Form 2, below. All invoices are numbered and entered on this sheet, charge-backs to manufacturers being entered in red. The expense column on this sheet, it may be noted incidentally, is for the purpose of recording invoices of operating supplies. At the end of the day, invoices are analyzed by departments, and the data thus obtained are entered in the purchase book, Form 3, page 104. One, or more, of these purchase-book sheets is used for each department for each month, depending on the number of entries made. At

Invoice
Number

From Whom Received

figures are obtainable periodically from these records for entry on the stock-ledger sheet.

Price changes, especially mark-downs, have been called the weak link of the retail method, since completely satisfactory results cannot be obtained if there is failure to record mark-downs, or if they are recorded incorrectly. The work of changing retail prices on merchandise tickets frequently is done in the selling departments rather than in the marking room. Under these circumstances, failure of the recorded price change to agree with the actual price change is not uncommon. For instance, in a large eastern department store, an analysis of stock shortages by departments revealed the fact that the selling departments with the largest stock shortages also were those that had the highest mark-down percentages. Evidently the mark-down records had failed to correspond in all cases with the actual mark-downs taken. In the matter of mark-downs, then, continual vigilance is necessary, not only to insure the effectiveness of the retail method but also to develop the necessary merchandise control.

In addition to mark-downs in the commonly understood sense of the term, there are other price changes that need to be recorded. Most firms, for instance, customarily grant a discount to their own employees. In numerous cases, also, discounts are granted to students, clergymen, or other favored classes. All these reductions from the marked retail prices must be recorded to insure the satisfactory operation of the retail method. Many firms for convenience include such price reductions in their records of mark-downs.

NET SALES FIGURES COMPLETE DATA REQUIRED FOR STOCK-LEDGER

The next data required on the stock-ledger sheet, Form 1, page 102, are the net sales for the department. Originally, of course, these figures are secured by means of the sales audit. The sales-audit figures usually are entered directly

in a sales book showing daily and weekly sales for each department, and from the sales book the net sales figures are transferred periodically to the stock-ledger sheets for the respective departments. These net sales figures complete the information necessary to determine the inventory at retail, its cost valuation, the cost of merchandise sold, and the maintained mark-up, or gross margin. Net sales plus mark-downs and other retail price reductions (also plus retail stock shortages as often as they are ascertained by means of a physical inventory) constitute total inventory reductions at retail. This figure, deducted from the total of beginning inventory at retail, purchases at retail, and net additional mark-ups, gives the retail inventory as of the date when the computation is made. Then the cost percentage applied to the retail inventory figure gives the cost valuation of the current inventory. Finally, this cost valuation figure deducted from the total of beginning inventory at cost and purchases at cost, gives the cost of sales, or cost of merchandise sold; and the difference between this latter figure and the net retail sales figure constitutes the maintained mark-up, or gross margin. On the stock-ledger sheet, Form 1, page 102, the section headed "Inventory Adjustments" provides a record of any inventory changes that may be necessary because of stock shortages, or other reasons, such as retail price adjustments due to errors in marking.

In the foregoing summary no attention has been given to the handling of three items, namely, inward transportation charges, discounts, and loading, inasmuch as practice differs among various firms as regards the treatment of these items.

INWARD TRANSPORTATION CHARGES

In theory, at least, inward transportation charges are well recognized as part of the cost of merchandise. The real cost of goods is their cost laid down at the merchant's place of business; and in deciding between two or more possible sources of purchase, it facilitates comparisons to consider

inward freight and truckage as a part of the cost of merchandise rather than as an operating expense. This view also is supported by the federal income tax regulations.¹ In department-store practice, nevertheless, the mark-up usually is taken directly on the billed cost of merchandise, even though the inward transportation charges periodically are exhibited on the merchandise statement as an addition to the cost of merchandise rather than being included in the expense statement. Frequently it might be difficult to allocate inward transportation charges to particular invoices; consequently, the practice of taking the mark-up directly on the billed cost has the merit of simplicity. If inward freight and truckage, however, eventually is to be computed as a part of the total merchandise cost in arriving at figures for the cost merchandise sold, the question arises as to how such inward transportation charges should be handled under the retail method of inventory. In the examples given in previous chapters, it was assumed that inward transportation charges were included in the cost of purchases. Where it is deemed expedient to leave these transportation charges out of consideration until after mark-up has been taken, in computing inventory according to the retail method they may be treated as shown in Table 21, page 110.

In this table, as may be seen, the amount of the inward transportation charge, namely \$20, is added in the cost column and subtracted in the mark-up column. The net result is that the mark-up of \$1,000 represents the difference between the total merchandise cost, including inward transportation charges, of \$2,100 and the total retail figure of \$3,100; and at the same time it represents the difference between the total mark-up over billed cost of \$1,020 and the inward transportation charges of \$20. This means simply that the inclusion of inward freight and truckage expense as a part of merchandise cost after the mark-up

¹Article 1583, page 318, Regulations 62, Treasury Department, 1922 edition, reads in part as follows: "Inventories at cost.—Cost means: . . . To this net invoice price should be added transportation or other necessary charges incurred in acquiring possession of the goods"

TABLE 21
TREATMENT OF INWARD TRANSPORTATION CHARGES UNDER
RETAIL METHOD

Merchandise	Cost	Retail	Mark-up	Percentage of Mark-up	Percentage of Cost
Opening Inventory..	\$1,000	\$1,500	\$ 500	33.33%	66.67%
Purchases.....	1,080	1,500	420	28.00	72.00
Additional Mark-up (net).....		100	100		
Inward Transportation Charges.....	20		(20)		
Total of Inventory Plus Additions...	2,100	3,100	1,000	32.26	67.74
Net Sales.....		\$1,500			
Mark-downs (net).....		<u>200</u>	1,700		
Retail Book Inventory.....		1,400			

Cost Valuation of Inventory = 67.74% of \$1

has been taken has the effect of reducing the amount of real mark-up, that is, mark-up over the billed cost of the merchandise plus inward freight and truckage. It is entirely feasible, therefore, to accumulate inward transportation charges separately and include them periodically in the computation of inventory valuation according to the retail method, when it is desired to determine cost of merchandise sold and gross margin.

CASH DISCOUNTS—ARE THEY A CAPITAL EARNING OR A MERCHANDISE EARNING?

The other two problems, namely, cash discounts and loading, are closely interwoven. In the examples given in previous chapters, neither of these items was taken into consideration. With respect to cash discounts, there has been wide-spread discussion of the question whether these properly constitute a merchandise earning or a capital earning.

Without attempting to decide the merits of this controversy, the principal points of divergence, both in the theory and in the practice, may be indicated briefly. Under the plan of treating cash discounts as a capital earning, if 10 articles are purchased for a given department at a billed cost of \$100 each, subject to a cash discount of 3%, the goods are charged to the department at the billed cost figure of \$1,000, and a credit of \$30 is made to a cash discount account maintained for the store as a whole. Under this arrangement, cash discounts appear as an additional profit in the net gain statement for the business as a whole. The theoretical basis for this procedure is the assumption that a cash discount is intrinsically a reward for having money on hand with which to pay bills promptly. Furthermore, since the financial problems of a department store are no concern of the buyers, it is urged that cash discounts should be considered as a management earning rather than a merchandise earning. From a practical point of view, the treatment of cash discounts as a financial profit is thought to afford some insurance against unforeseen losses.

On the other hand, a considerable number of firms treat cash discounts as a merchandise earning, the cash discounts actually obtained being credited to the respective departments rather than credited to a cash discount account for the business as a whole. For example, if 10 articles are purchased for a given department at a billed cost of \$100 each, and a cash discount of 3% obtained, the merchandise is charged to the department at the billed cost of \$1,000, and the cash discount account of that department is credited with \$30. This procedure usually is followed rather than a plan of charging the merchandise to the department at the net cost of \$970, since in most instances it is not considered feasible to charge merchandise to departments at net cost figures, especially if goods for more than one department come in on the same invoice, because of the labor involved in computing the net cost for each item. When cash discounts are treated as a merchandise

earning, they customarily are included periodically in the gross margins for the respective departments, commonly being shown as a reduction of the cost of merchandise.¹ The theoretical justification offered for this treatment is that a cash discount in reality constitutes a correction of the billed price of merchandise. The real price of the merchandise is assumed to be the net price, the difference between that and the billed price being a charge made by the seller partly in the nature of interest and partly as a compensation for the risk involved in delayed payment. An additional consideration in favor of treating cash discounts as a merchandise earning is that they frequently are secured as much on account of the bargaining ability of buyers as on account of able management of the store's finances. The practical arguments also are advanced that the treatment of cash discounts as a merchandise earning is the best method of exhibiting the true earnings of each department and that this treatment offers an additional incentive to buyers to make a good showing in their departments.

RELATION OF CASH DISCOUNTS TO THE RETAIL METHOD

In instances where cash discounts are treated as a capital earning and do not appear as part of the gross margin of any individual selling departments, it is clear that they have no effect on the operation of the retail method of

¹This treatment of cash discounts is illustrated by the following sample merchandise statement:

Gross Sales.....	\$31,313	
Returns and Allowances to Customers.....	313	
Net Sales		\$31,000
Net Inventory of Merchandise at Beginning of Year.....	\$ 9,195	
Purchases of Merchandise at Billed Cost.....	19,583	
Inward Freight, Express, and Truckage.....	185	
Gross Cost of Merchandise Handled.....	\$28,963	
Cash Discounts Taken	527	
Net Cost of Merchandise Handled.....	\$28,436	
Net Inventory of Merchandise at End of Year.....	9,309	
Net Cost of Merchandise Sold.....		19,127
Gross Margin		\$11,873

inventory. To the total of the departmental profit figures, as determined by the retail method, the cash discounts earned by the business as a whole may be added for the purpose of determining the final net profit figure. Experience indicates that it also is desirable to follow a somewhat similar procedure in cases where cash discounts are treated as a merchandise earning. Since it commonly is not considered feasible to deduct cash discounts from invoices immediately in order to accumulate purchase figures at net cost rather than at billed cost, the cash discounts credited to each department may be added periodically to the gross margin of that department as determined by the retail method.

Up to this point no particular difficulties are presented. Here, however, a further problem arises. It is a conservative policy not to regard cash discounts taken on purchases of merchandise as constituting a real gain until after the merchandise on which the discounts were taken actually has been sold. In strict accordance with this theory, therefore, there should be deducted from the billed-cost value of the closing inventory an amount equivalent to the cash discounts taken on the merchandise comprised in that inventory.¹ Here intervenes, however, a consideration of uncer-

¹This may be illustrated by the following sample merchandise statement:

Gross Sales	\$31,313 00	
Returns and Allowances to Customers.....	313.00	
	<hr/>	\$31,000.00
Net Sales		
Net Inventory of Merchandise at Beginning of Year	\$ 9,195.00	
Purchases of Merchandise at Billed Cost....	19,583.00	
Inward Freight, Express, and Truckage....	185.00	
Gross Cost of Merchandise Handled.		
Cash Discounts Taken.....		
Net Cost of Merchandise Handled.....		
Gross Inventory of Merchandise at End of Year	\$ 9,309.00	
Allowance for Cash Discounts Taken.....	250.41	
	<hr/>	
Net Inventory of Merchandise at End of Year	9,058.59	
Net Cost of Merchandise Sold.....		19,377.41
Gross Margin		<hr/>
		\$11,622.59

In the foregoing merchandise statement, inventory at the beginning of the period is the net figure, while at the end of the period it is assumed

(Footnote continued on page 114)

tain weight, namely, the attitude of the federal tax authorities with respect to such deductions. In the income tax regulations, cost is defined as follows:

1. In the case of merchandise on hand at the beginning of the taxable year, the inventory price of such goods.

2. In the case of merchandise purchased since the beginning of the taxable year, the invoice price less trade or other discounts, except strictly cash discounts, approximating a fair interest rate, which may be deducted or not at the option of the taxpayer, provided a consistent course is followed. To this net invoice price should be added transportation or other necessary charges incurred in acquiring possession of the goods.¹

.....
Office Decision 326 of the Treasury Department, on the other hand, reads, in part, as follows:

Taxpayers who, as a matter of settled practice, do not deduct cash discounts from purchases, but who take the merchandise purchased into their inventories at invoice price, carrying the discounts in a discount account, may not, in valuing their closing inventories for income tax purposes, deduct from the invoice price of the merchandise on hand at the close of the taxable year the average amount of cash discount received on such merchandise;

This office decision apparently requires that cash discounts must be treated as a merchandise earning in case

(Footnote continued from page 113)

that a physical inventory is taken of merchandise on hand at billed cost. For the sake of simplicity, the element of depreciation is disregarded. The allowance for cash discounts taken, \$250.41, is obtained as follows: The total amount of cash discounts taken, \$527, is divided by the purchases of merchandise at billed cost, \$19,583; this results in a percentage figure of 2.69%. This average is assumed to apply to the goods still on hand. Multiplying the gross inventory of \$9,309, taken at billed-cost figures, by 2.69% gives \$250.41 as the allowance for cash discounts taken. This allowance deducted from the gross inventory shows the net inventory of merchandise at the end of the period. If this procedure is not followed, the total amount of cash discounts taken, \$527, is shown as a total addition to profit, even though on \$9,309 worth of the purchases of \$19,583, not even the cost of the goods has been recovered, to say nothing of any profit.

¹Article 1583, page 318: Regulations 62, Treasury Department, United States Internal Revenue, 1922 edition.

²*Cumulative Bulletin Number 1*, Treasury Department, Bureau of Internal Revenue, page 56.

it is desired to deduct from the closing inventory an allowance for cash discounts taken. From the wording of this office decision, furthermore, it is by no means certain that such allowances will be recognized even when cash discounts are treated as a merchandise earning, since, as previously pointed out, the common practice in such cases is not to deduct cash discounts from purchases immediately, but to credit them to the cash discount account of the particular department.

Even on the assumption, however, that this apparent difficulty ultimately will be settled in such a way as to permit the deduction of a cash discount allowance from the billed cost value of the closing inventory, there still will be no need to disturb the procedure of the retail method. After the gross margin of a department has been determined by this method, there may be included with it the additional departmental profit represented by cash discounts taken on purchases, less allowance for cash discounts taken on the unsold goods remaining in the closing inventory. Thus cash discounts, however handled, need occasion no interference with the routine operation of the retail method as described in the first part of this chapter.

LOADING

The importance attached by many department stores to cash discounts has resulted in the adoption of various plans designed to make buyers secure as large cash discounts as possible. The most generally used device of this sort is the one commonly known as "loading." Under this plan, each selling department is charged, or "loaded," with the difference between the cash discount which the buyer actually secures on merchandise purchased and a standard rate of discount established either for that department or for all departments. This standard rate usually is from 6% to 10% of the billed price. In a store where the required rate of discount is 7%, if the billed price on an invoice of

merchandise for the women's suit department is \$200, for example, and the buyer secures a cash discount of 4% from the manufacturer, the cash discount account for the store as a whole is credited with \$14, and the merchandise is charged to the women's suit department at \$206, the mark-up being based on this figure. This procedure may be shown as follows:

Billed Cost of Merchandise.....		\$200
Cash Discount Required (7%).....	\$14	
Cash Discount Actually Obtained (4%).....	<u>8</u>	
Balance to Make 7%.....		<u>6</u>
Merchandise Charged to Women's Suit Department at.....		\$206
Cash Discount Account for the Store as a Whole Credited with		<u>14</u>
Net Cost of Merchandise.....		\$192
Merchandise Marked to Sell at \$300		
Actual Mark-up Over Net Cost = \$300 - \$192 = \$108, or 36%		
Departmental Mark-up Over Loaded Cost = \$300 - \$206 = \$94, or		
31.33%		

In cases where the discount actually secured exceeds the discount required, the selling department naturally is credited with the difference. The practice of loading most commonly is employed in stores where cash discounts are treated as a capital earning, although this need not necessarily be the case, and instances are not wanting where the plan of loading is used in conjunction with a policy of treating cash discounts as a merchandise earning of the individual selling departments.¹

¹There is some difference of opinion as to the merits of the loading plan. The arguments commonly advanced in its favor may be summarized as follows:

It is said that loading gives buyers a direct incentive to secure the largest cash discounts possible, since their departments are penalized if they do not obtain the required discounts and are helped if they exceed them. The operation of loading, furthermore, immediately brings to the attention of the management the failure of any buyer to obtain cash discounts of the required amount. It also is asserted that this practice places all departments on a uniform basis for the comparison of mark-up percentages. When mark-ups are based on the billed cost of the merchandise, percentages of mark-up do not afford a reliable means of comparing real mark-ups, especially between departments, because of variations in the percentages

EFFECT OF LOADING ON THE RETAIL METHOD

That the practice of loading necessarily affects the operation of the retail method is immediately evident, since, according to this practice, merchandise is charged to departments at a loaded cost rather than at billed cost. The accumulated loaded-cost figures over a period for most departments commonly are higher than the accumulated billed-cost figures, since it is more usual for buyers not to obtain the required rate of discount than for them to exceed it. The net effect, therefore, is to inflate the cost of purchases and to reduce correspondingly the amount of mark-up shown on a departmental stock-ledger. Thus, when the loaded-cost figures are used in the operation of the retail method of inventory, the result is to increase the cost percentage which is applied to the retail inventory figure for the purpose of reducing it to a cost valuation, since the

of cash discounts actually received. When merchandise is charged to departments at loaded figures, however, buyers can determine mark-up on a more nearly fixed basis and all mark-up percentages are comparable, since they all are based on actual net cost plus a fixed percentage, 7%, for example, which represents the combined discount and loading. Also, without the device of loading, buyers may be misled by the billed cost of merchandise and fail to consider variations in cash discounts actually received. Where the plan of loading is in use, however, it is unnecessary for a buyer, in determining the retail price, to consider the amount of cash discount secured. Thus the possibility is obviated that he may not place a sufficiently high mark-up on merchandise to counteract a lower than normal cash discount. It also is asserted that the practical result of loading is to set up a reserve, amounting, for example, to 7% of the cost of the merchandise, or approximately 5% of the selling price. In this way the net profit of the store is supposed to be protected, since even if the combined indirect and direct expenses of a department exactly equal its gross margin, the store, nevertheless, secures a profit on the department's operations amounting to approximately 5% of its net sales, on the assumption that 7% of billed cost is the required rate of discount. In other words, it is assumed that loading causes buyers not only to set original retail prices sufficiently high, but also to refrain from unnecessary mark-downs and to avoid incurring excessive expenses.

There appear to be an almost equally formidable array of arguments on the other side of the question. In the case of some departments, trade customs have established relatively low discounts; in hosiery, for example, the customary cash discount is 2%. With a required cash discount of 7%, for example, these departments are penalized and frequently are unable to show any net profit, although on account of the combined loading and

(Footnote continued on page 118)

cost percentage is the complement of the mark-up percentage. Hence, if loaded-cost figures are used in the routine operation of the retail method as described in the earlier part of this chapter, the resulting cost valuation of the goods on hand at any time will be an inflated figure; this naturally means that the profit figure likewise will be inflated. Recognizing this difficulty, several department-store firms, after adopting the retail method, decided to discontinue the practice of loading. There is another way out of the difficulty, however, for those firms that consider loading essential for the adequate control of departments.

The primary purpose of the retail method, after all, is to afford better control through making instantly available for each department or stock division true figures for the cost value of goods on hand, the cost of sales, and the gross margin. Secondary in importance is its advantage as a means of providing a correct net profit figure for the purpose of reporting taxable income. Furthermore, figures

(Footnote continued from page 117)

discount a profit for the store as a whole is earned on their operations. The practice of loading also may result in causing buyers to give more attention to the rate of cash discount offered than to the quality of the merchandise. It is stated, furthermore, that manufacturers who are familiar with the cash discount requirements of large department stores not infrequently make corresponding adjustments in setting their billed prices. In answer to the argument that the practice of loading has the effect immediately of laying aside a definite amount of profit, it is pointed out that no real profit can be realized until the merchandise has been sold. Careful planning of sales and purchases, the use of stock records, frequent physical inventories, and the use of the retail plan of merchandise accounting are urged as the primary methods of protecting net profit. On many invoices, moreover, several items may appear, and unless loading is figured on each individual item, at a considerable clerical expense, the loaded figure given to the buyer is computed only on the total billed cost of the items on the invoice. In placing retail prices on each item, it is asserted that buyers pay attention only to the billed cost and do not compute the loaded cost per item. In addition, retail prices frequently have to be established in accordance with competition, or with price levels to which customers are habituated. In pricing goods under these conditions, the amount of cash discount obtained frequently is disregarded. The system of loading, moreover, besides requiring additional clerical labor, tends to be complicated and confusing. Finally, if it is assumed that the purpose of accounting is to furnish accurate records of a business, there is some ground for regarding loading as a piece of bookkeeping machinery that obscures actual conditions.

for tax return purposes are required but once a year. If the practice of loading is considered necessary, therefore, there is no reason why the retail method should not be operated regularly for purposes of departmental control with loaded-cost figures, and a separate calculation according to the retail method made once a year on the basis of either billed or net-cost figures,¹ in order to arrive at true net-profit figures for income tax purposes. For the purpose of this separate calculation, it is only necessary to go back to the departmental purchase records (Form 3, page 104), for the fiscal period. The calculation according to the retail method then proceeds in the regular way, utilizing the other data on the stock-ledger sheet (Form 1, page 102).

SOME DEPARTMENTS IN WHICH RETAIL METHOD CANNOT BE USED

It is clear that the retail plan of merchandise accounting can be used only where both cost and retail prices are known definitely in advance of sale. It follows that the retail method cannot be used successfully in departments which engage in manufacturing operations or equivalent activities. In the soda fountain or prescription sections of a drug department, for instance, although costs are known definitely, the retail prices obviously cannot be determined in advance of sale. This also may be true where manufacturing operations are carried on in conjunction with such departments as furs or millinery. Here the retail prices frequently cannot be known when the materials are purchased; and, furthermore, the cost prices also cannot be known definitely at this time, because they properly include charges for labor and overhead expense involved in manufacturing operations. Much the same situation obtains in a few other departments, such as wallpaper and interior decorations, where the retail prices include labor charges.

¹For a discussion of the relation of cash discounts to the taxable income of mercantile businesses, see pages 110-115.

CASE OF VARIABLY PRICED ARTICLES

In this same connection, a minor problem arises in some small-ware departments where articles are priced both on a quantity basis and on a unit basis. Hairnets, for instance, may be priced at 15 cents each or two for 25 cents. When the retail method is employed in such departments, the usual plan is to carry variably priced articles on the stock-ledgers at the quantity prices rather than at the unit prices. Thus the hairnets are carried on the stock-ledgers on the two-for-a-quarter basis rather than at 15 cents each. Such departments, therefore, normally exhibit a small inventory overage in dollars and cents whenever a physical inventory is taken.

FIGURING STOCK-TURN UNDER THE RETAIL METHOD

Finally, there may be mentioned the question of what figures to use in determining the rate of stock-turn. Stock-turn is the actual disposal and replacement of a stock of merchandise; the rate of stock-turn is the number of times during a given period that the stock on hand during that period is sold and replaced. The use of physical units, such as pairs of shoes, in ascertaining the rate of stock-turn is perhaps the ideal plan, but this is not always practical; and because of its simplicity the common method is to figure stock-turn by units of value. The rate of stock-turn when computed in dollars and cents of cost values (cost of merchandise sold divided by average inventory at cost) practically amounts to the rate of stock investment turnover, disregarding credit factors. Where the retail method is in use, it has become customary to use selling-price figures rather than cost figures in determining the rate of stock-turn (net sales divided by average inventory at retail). Of course, there is nothing to prevent a firm operating on the retail method from using the cost basis in determining the rate of stock-turn. The figure for the rate of stock-turn

arrived at on the retail basis, it may be noted, frequently will not tally exactly with the stock-turn rate as determined from the same data on a cost basis.

This variation may be illustrated by means of the figures given in Tables 14 to 20, Chapter VI, pages 90 to 93. At the beginning of the first month of the season, as shown in Table 14, the inventory was \$8,000 at cost and \$12,000 at retail; at the beginning of the second month, it was \$10,075 at cost and \$15,500 at retail. Similarly, cost and retail inventory figures were shown for each of the remaining months of the season, the final inventory figures being \$7,462 at cost and \$10,200 at retail, as shown by Table 19. The total of the seven inventories at cost for the season was \$70,506, representing an average cost inventory of \$10,072. Similarly, the total of the seven retail inventories was \$101,800, representing an average retail inventory of \$14,543. As shown by Table 20, the total cost of the opening inventory plus purchases for the season was \$35,600. The difference between this figure of \$35,600 and the figure of \$7,462 in Table 19 for cost valuation of the inventory at the close of the season was \$28,138. This figure represented the cost of merchandise sold. At the same time, as shown by Table 20, total sales at retail dur-

TABLE 22
STOCK-TURN AT COST AND AT RETAIL

Monthly Inventories at Cost	Cost of Merchandise Sold	Monthly Inventories at Retail	Net Sales
	\$28,138		\$40,200
\$ 8,000		\$12,000	
10,075		15,500	
13,301		19,500	
12,682		18,200	
10,082		14,200	
8,904		12,200	
7,462		10,200	
7) \$70,506		7) \$101,800	
10,072	) \$28,138	14,543	) \$40,200
	2.79 times		2.76 times

ing the season amounted to \$40,200. When the rate of stock-turn is figured on the cost basis ($\$28,138 \div \$10,072$), the result is 2.79 times. When the rate of stock-turn is figured on the retail basis, however, ($\$40,200 \div \$14,543$), the result is 2.76 times. These computations are summarized in Table 22, page 121. The variation will be slightly greater if the cost of merchandise sold is computed on the basis of the inventory valuation figure of \$7,204 appearing in Table 20.

For practical purposes, it is evident that either method will serve equally well to determine the rate of stock-turn. Because of the frequent slight variation in results, however, it is desirable that a firm should adhere regularly to either one plan or the other in order to have its departmental stock-turn figures all on a uniform basis.

VIII

SUMMARY

Chief advantage of retail method. Field is limited. General use not likely in small unit stores. Some obstacles to use of complete retail method in chain stores. Usefulness lies primarily in the department-store field.

It is evident that the principal value of the retail, or selling-price method of merchandise accounting is in affording an instantly available means for determining accurately the merchandising profit earned during any period and arriving at a conservative cost valuation of the merchandise remaining in stock. In these respects, the advantages of this plan, especially for certain types of mercantile businesses, outweigh the dangers of inaccuracy that are inherent in any averaging method of inventory valuation.

The field in which the retail method can be successfully applied is in several respects limited. In manufacturing businesses, where costs include labor, overhead, and other expense in addition to the cost of materials, a selling price method of merchandise accounting clearly is not feasible, except in so far as it may be applicable to the accounting for warehouses or wholesale branches. And even in wholesale business the practice of permitting salesmen to vary prices, as previously pointed out, might offer some obstacle to the successful use of any device corresponding to the retail method. A similar difficulty likewise might be caused by quantity discounts.

In the ordinary type of unit store it is not to be expected that the retail inventory plan will come into general use, since the average firm of this sort is not accustomed to maintaining the necessary records, particularly with regard to mark-downs. In unit stores with comparatively large

sales volume, however, and particularly in those stores selling homogeneous merchandise, such as men's clothing stores and shoe stores, it is quite likely that the retail method can be used to advantage.

In the case of chain stores selling convenience goods, such as groceries and drugs, the retail method has long been in use in a limited form, in that goods are charged to the individual stores at retail prices, thus affording a check on stock shortages. Although in some instances the complete retail method is used in chain stores for the determination of profit, a common plan, as previously described, is to have the physical inventory taken by items at cost prices at least once or twice a year, cost records being kept in such a way as to facilitate the determination of market value if necessary. Under this plan, profits during the interim sometimes are estimated by means of a percentage basis which is somewhat similar to the complete retail method. There are, nevertheless, some possible obstacles to the use of the complete retail method in chain-store systems. The departmentization of chain stores, so far as merchandise figures are concerned, frequently is not undertaken at all, and in other cases is developed only on such a limited scale that it might be inadequate for the use of the complete retail method. This is especially the case since there is a considerable variation in the rates of mark-up among the various classes of merchandise sold, both in chain grocery stores and in chain drug stores. Again, depreciation normally is not a particularly important factor in these businesses, since the rate of stock-turn is ordinarily fairly rapid and the merchandise is staple in character. The problem of accurate valuation of inventory is not, therefore, as serious a one as it is for retail establishments selling seasonal style merchandise. Hence, although the complete retail inventory plan perhaps offers some advantages over several of the merchandise accounting plans now in use in convenience goods chains, it does not appear likely that the use of this method will become general in this field.

USEFULNESS LIES PRIMARILY IN THE DEPARTMENT-
STORE FIELD

In the case of department stores and metropolitan specialty stores, the situation is quite different. A majority of these firms are thoroughly departmentized; many of them, in fact, have set up separate stock divisions within individual departments. The bulk of sales in these stores is made up of seasonal wearing apparel; the style feature is all-important; and stocks are large, since customers demand a variety of goods from which to choose. Also, because of the rapidity with which fashions change, the volume of mark-downs is large; and the losses from style depreciation and obsolescence frequently reach surprisingly high figures. The keen competition among such retail establishments normally does not permit increased profits to be secured from high original mark-ups. On the other hand, careful management in numerous instances has succeeded in holding expense ratios down to a point beyond which many firms feel that they cannot go without seriously curtailing the services offered to customers. Again, a considerable group of large department stores are already past the period in their development where additional sales volume results in lower expense ratios and increased profits. Under these circumstances, practically the only remaining possibility is to undertake to curb the losses occasioned by mark-downs and depreciation, since if the maintained gross margin can be made to constitute a larger proportion of the original mark-up, net profit will be correspondingly increased, provided expense ratios remain constant. Successful merchandising under these conditions requires accurate and instantly available knowledge of all the facts. Time is a vital factor. The executive making decisions cannot delay; he must have all the facts at his finger-tips. Guesswork does not pay dividends. Therefore, because the retail inventory method is peculiarly adapted for use under these conditions, its chief development for

some years to come is likely to be in the department-store field.

Inasmuch as the selling-price plan of merchandise accounting is fundamentally sound in principle, however, its eventual extension to other types of mercantile business is to be expected.

APPENDIX

APPENDIX

(TREASURY DECISION 3296)

Income Tax—Inventories—Articles 1581-88 Regulations 45,
(1920 edition) Amended.

TREASURY DEPARTMENT

OFFICE OF COMMISSIONER OF INTERNAL REVENUE,
WASHINGTON, D. C.

TO COLLECTORS OF INTERNAL REVENUE AND OTHERS CONCERNED:

Articles 1581-88 Regulations 45, (1920 edition), are amended to read as follows:

ART. 1581. *Need of Inventories.* In order to reflect the net income correctly, inventories at the beginning and end of each year are necessary in every case in which the production, purchase, or sale of merchandise is an income-producing factor. The inventory should include raw materials and supplies on hand that have been acquired for sale, consumption or use in productive processes, together with all finished or partly finished goods. Only merchandise title to which is vested in the taxpayer should be included in the inventory. Accordingly the seller should include in his inventory goods under contract for sale but not yet segregated and applied to the contract and goods out upon consignment, but should exclude from inventory goods sold, title to which has passed to the purchaser. A purchaser should include in inventory merchandise purchased, title to which has passed to him although such merchandise is in transit or for other reasons has not been reduced to physical possession, but should not include goods ordered for future delivery transfer of title to which has not yet been effected.

ART. 1582. *Valuation of Inventories.* The act provides two tests to which each inventory must conform—(1) It must conform as nearly as may be to the best accounting practice in the trade or business, and (2) it must clearly reflect the income. It follows, therefore, that inventory rules cannot be uniform but must give effect to trade customs which come within the scope of the best accounting practice in the particular trade or business. In order to clearly reflect income, the inventory practice of a

taxpayer should be consistent from year to year, and greater weight is to be given to consistency than to any particular method of inventorying or basis of valuation, so long as the method or basis used is substantially in accord with these regulations. An inventory that can be used under the best accounting practice in a balance sheet showing the financial position of the taxpayer can, as a general rule, be regarded as clearly reflecting his income.

The basis of valuation most commonly used by business concerns and which meets the requirements of the Revenue Act is (a) cost or (b) cost or market, whichever is lower. (For inventories by dealers in securities, see Art. 1585.) Any goods in an inventory which are unsalable at normal prices or unusable in the normal way because of damage, imperfection, shop wear, changes of style, odd or broken lots, or other similar causes, including second-hand goods taken in exchange, should be valued at bona fide selling prices less cost of selling whether basis (a) or (b) is used, or if such goods consist of raw materials or partly finished goods held for use or consumption, they should be valued upon a reasonable basis, taking into consideration the usability and the condition of the goods, but in no case shall such value be less than the scrap value. Bona fide selling price means actual offerings of goods during a period ending not later than 30 days after inventory date. The burden of proof will rest upon the taxpayer to show that such exceptional goods as are valued upon such selling basis come within the classifications indicated above and he shall maintain such records of the disposition of the goods as will enable a verification of the inventory to be made.

In respect to normal goods whichever basis (a) or (b) is adopted must be applied with reasonable consistency to the entire inventory. Taxpayers were given an option to adopt the basis of either (a) cost or (b) cost or market, whichever is lower, for their 1920 inventories, and the basis adopted for that year is controlling and a change can now be made only after permission is secured from the Commissioner. Goods taken in the inventory which have been so intermingled that they cannot be identified with specific invoices will be deemed to be either (a) the goods most recently purchased or produced, and the cost thereof will be the actual cost of the goods purchased or produced during the period in which the quantity of goods in the inventory has been acquired, or (b) where the taxpayer maintains book inventories in accordance with a sound accounting system in which the respective inventory accounts are charged with the actual cost of the goods purchased or produced and credited with the value of goods used, transferred, or sold, calculated upon the basis of the

actual cost of the goods acquired during the taxable year (including the inventory at the beginning of the year) the net value as shown by such inventory accounts will be deemed to be the cost of the goods on hand. The balances shown by such book inventories should be verified by physical inventories at reasonable intervals and adjusted to conform therewith.

Inventories should be recorded in a legible manner, properly computed and summarized, and should be preserved as a part of the accounting record of the taxpayer. The inventories of taxpayers on whatever basis taken will be subject to investigation by the Commissioner, and the taxpayer must satisfy the Commissioner of the correctness of the prices adopted.

The following methods, among others, are sometimes used in taking or valuing inventories, but are not in accord with these regulations, viz:

(a) Deducting from the inventory a reserve for price changes, or an estimated depreciation in the value thereof.

(b) Taking work in process, or other parts of the inventory, at a nominal price or at less than its proper value.

(c) Omitting portions of the stock on hand.

(d) Using a constant price or nominal value for a so-called normal quantity of materials or goods in stock.

(e) Including stock in transit, either shipped to or from the taxpayer, the title of which is not vested in the taxpayer.

ART. 1583. *Inventories at cost.* Cost means:

1. In the case of merchandise on hand at the beginning of the taxable year, the inventory price of such goods.

2. In the case of merchandise purchased since the beginning of the taxable year, the invoice price less trade or other discounts, except strictly cash discounts, approximating a fair interest rate, which may be deducted or not at the option of the taxpayer, provided a consistent course is followed. To this net invoice price should be added transportation or other necessary charges incurred in acquiring possession of the goods.

3. In the case of merchandise produced by the taxpayer since the beginning of the taxable year (a) the cost of raw materials and supplies entering into or consumed in connection with the product, (b) expenditures for direct labor, (c) indirect expenses incident to and necessary for the production of the particular article, including in such indirect expenses a reasonable proportion of management expenses, but not including any cost of selling or return on capital whether by way of interest or profit.

4. In any industry in which the usual rules for computation of cost of production are inapplicable, costs may be approximated upon such basis as may be feasible and in conformity with established trade practice in the particular industry. Among such cases are (a) farmers and raisers of live stock (see article 1586), (b) miners and manufacturers who by a single process or uniform series of processes derive a product of two or more kinds, size, or grade, the unit cost of which is substantially alike (see article 1587), and retail merchants who use what is known as the "retail method" in ascertaining approximate cost. (See article 1588).

ART. 1584. *Inventories at market.* Under ordinary circumstances, and for normal goods in an inventory, "market" means the current bid price prevailing at the date of the inventory for the particular merchandise in the volume in which usually purchased by the taxpayer, and is applicable in the cases (a) of goods purchased and on hand, and (b) of basic elements of cost (materials, labor, and burden) in goods in process of manufacture and in finished goods on hand; exclusive, however, of goods on hand or in process of manufacture for delivery upon firm sales contracts (i. e., those not legally subject to cancellation by either party) at fixed prices entered into before the date of the inventory, which goods must be inventoried at cost. Where no open market exists or where quotations are nominal due to stagnant market conditions, the taxpayer must use such evidence of a fair market price at the date or dates nearest the inventory as may be available, such as specific purchases or sales by the taxpayer or others in reasonable volume and made in good faith, or compensation paid for cancellation of contracts for purchase commitments. Where the taxpayer in the regular course of business has offered for sale such merchandise at prices lower than the current price, as above defined, the inventory may be valued at such prices less proper allowance for selling expense, and the correctness of such prices will be determined by reference to the actual sales of the taxpayer for a reasonable period before and after the date of the inventory. Prices which vary materially from the actual prices so ascertained will not be accepted as reflecting the market. It is recognized that in the latter part of 1918, by reason among other things of governmental control not having been relinquished, conditions were abnormal and in many commodities there was no such scale of trading as to establish a free market. In such a case, when a market was established during the succeeding year, a claim may be filed for any loss sustained in accordance with the provisions of section 214 (a) (12) or section 234 (a) (14) of the statute. See articles 261-268.

ART. 1585. *Inventories by dealers in securities.* A dealer in securities, who in his books of account regularly inventories unsold securities on hand either (a) at cost or (b) at cost or market, whichever is lower, or (c) at market value, may make his return upon the basis upon which his accounts are kept; provided that a description of the method employed shall be included in or attached to the return, that all the securities must be inventoried by the same method, and that such method must be adhered to in subsequent years, unless another be authorized by the Commissioner. For the purpose of this rule a dealer in securities is a merchant of securities, whether an individual, partnership, or corporation, with an established place of business, regularly engaged in the purchase of securities and their resale to customers; that is, one who as a merchant buys securities and sells them to customers with a view to the gains and profits that may be derived therefrom. If such business is simply a branch of the activities carried on by such person, the securities inventoried as here provided may include only those held for purpose of resale and not for investment. Taxpayers who buy and sell or hold securities for investment or speculation, and not in the course of an established business, and officers of corporations and members of partnerships, who in their individual capacities buy and sell securities, are not dealers in securities within the meaning of this rule. A dealer in securities is not entitled to the benefits of section 206 with reference to the gain from the sale of securities.

ART. 1586. *Inventories of live-stock raisers and other farmers.*

1. Farmers may change the basis of their returns from that of receipts and disbursements to that of an inventory basis, which necessitates the use of opening and closing inventories for the year in which the change is made. There should be included in the opening inventory all farm products (including live stock) purchased or raised which were on hand at the date of the inventory, but inventories must not include real estate, buildings, permanent improvements, or any other assets subject to depreciation.

2. Because of the difficulty of ascertaining actual cost of live stock and other farm products, farmers who render their returns upon an inventory basis may at their option value their inventories for the current taxable year according to the "farm-price method" which provides for the valuation of inventories at market price less cost of marketing. If the use of the "farm-price method" of valuing inventories for any taxable year involves a change in method of pricing inventories from that employed in prior years, the opening inven-

tory for the taxable year in which the change is made should be brought in at the same value as the closing inventory for the preceding taxable year. If such valuation of the opening inventory for the taxable year in which the change is made results in an abnormally large income for that year, there may be submitted with the return for such taxable year an adjustment statement for the preceding year based on the "farm-price method" of valuing inventories; upon the amount of which adjustments the tax, if any be due, shall be assessed and paid at the rate of tax in effect for such preceding year.

3. Where returns have been made in which the taxable net income has been computed upon incomplete inventories, the abnormality should be corrected by submitting with the return for the current taxable year a statement for the preceding year in which such adjustments shall be made as are necessary to bring the closing inventory for the preceding year into agreement with the opening complete inventory for the current taxable year. If necessary to reflect the income, similar adjustments may be made as at the beginning of the preceding year and the tax, if any be due, shall be assessed at the rate of tax in effect for such year.

ART. 1587. *Inventories of miners and manufacturers.* A taxpayer engaged in mining or manufacturing who by a single process or uniform series of processes derives a product of two or more kinds, sizes, or grades, the unit cost of which is substantially alike, and who in conformity to a recognized trade practice allocates an amount of cost to each kind, size, or grade of product which in the aggregate will absorb the total cost of production, may use such allocated cost as a basis for pricing inventories, provided such allocation bears a reasonable relation to the respective selling values of the different kinds of product.

ART. 1588. *Inventories of retail merchants.* Retail merchants who employ what is known as the "retail method" of pricing inventories may make their returns upon that basis, provided that the use of such method is designated upon the return, that accurate accounts are kept, and that such method is consistently adhered to unless a change is authorized by the Commissioner. Under this method the goods in the inventory are ordinarily priced at the selling prices and the total retail value of the goods in each department or of each class of goods is reduced to approximate cost by deducting the percentage which represents the difference between the retail selling value and the purchase price. This percentage is determined by departments of a store or by classes of goods, and should represent as accurately as may be the amounts

added to the cost prices of the goods to cover selling and other expenses of doing business and for the margin of profit. In computing the percentage above mentioned, proper adjustment should be made for all mark-ups and mark-downs.

A taxpayer maintaining more than one department in his store or dealing in classes of goods carrying different percentages of gross profit should not use a percentage and profit based upon an average of his entire business, but should compute and use in valuing his inventory the proper percentages for the respective departments or classes of goods.

D. H. BLAIR

Commissioner of Internal Revenue

APPROVED: March 3, 1922

A. W. MELLON

Secretary of the Treasury

TREASURY DEPARTMENT

OFFICE OF COMMISSIONER OF INTERNAL REVENUE
WASHINGTON, D. C.

Income Tax Mimeograph

March 23, 1923

Coll. No. 3077

R. A. No. 249

Inventories of Retail Dry-Goods Dealers

TO COLLECTORS OF INTERNAL REVENUE,
INTERNAL REVENUE AGENTS IN CHARGE,
AND OTHERS CONCERNED:

Attention is invited to the provisions of Treasury Decision 3296, amending Article 1588 of Regulations 45, and to Article 1588, Regulations 62, dealing with the "retail method" of pricing inventories.

Numerous inquiries have been made with respect to the scope of the article and accordingly this mimeograph is issued with a view to explaining some of the questions most frequently arising.

Article 1588 provides that any retail merchant may employ the "retail method" of pricing inventories provided that the use of such method is designated upon the return, that accurate accounts are kept, and that such method is consistently adhered to. If a taxpayer elects to change from the "cost" or "cost or market"

basis to the "retail method," such method will not be recognized unless it has been regularly followed and records properly kept throughout the entire accounting period for which return is made.

The "retail method" is essentially a cost method of valuing inventories, but the rule is not inflexible. On a constant or rising market, it is approximately a "cost" method, but on a falling market it may result in a reduction to "cost or market, whichever is lower."

The provisions of the regulation providing that accurate records must be kept, contemplates that certain records shall be kept by departments in permanent form for the inspection of internal revenue officers. Purchase records should show the firm name, date of invoice, invoice cost, and retail sales price. A permanent record should also be kept of the accumulation of all department purchases, mark-downs, sales, stock, and so forth.

Under the retail method the goods in the inventory are ordinarily priced at the selling prices, and the total retail value of the goods is reduced to approximate cost by deducting the percentage which represents the difference between the retail selling value and the purchase price. In order to compute this percentage properly, goods should be recorded by departments at two prices: (a) invoice price plus transportation, and (b) original retail price. The total purchase mark-up for the accounting period is the difference between—

Cost: Inventory at the beginning of the period
Purchases at cost
Transportation
and

Retail: Inventory at sales price
Purchase at sales price

This total mark-up, divided by the total retail value, will give the percentage of purchase mark-up. Under no circumstances should arbitrary standard percentages of purchase mark-up be used, but such percentage must be the mark-up percentage computed as accurately as possible from the department records of the accounting period for which the return is made.

The article also provides that, in computing the percentage above mentioned, proper adjustment should be made for all mark-ups and mark-downs. This means mark-ups and mark-downs with respect to original retail price. It contemplates that it is proper to add in computing the percentage as a part of the original retail sales price the actual increase in such price which has been brought about by market conditions and by incorrect pricing when

the goods were put into stock. For the convenience of the examining officer, a special form should be provided in which complete information by items of the increase from the original retail should be shown and reference, if possible, made to the original invoice and entry, and the reason for the increase freely explained. Entry of such increased retail properly belongs in department purchase books, although it may be set up as a separate item in the accumulated records of the department. The same forms that are used to record such price increases should not be used for mark-downs and in no instance will a store be allowed to include as retail increases a mark-up which has been taken as a correction or cancelation of a mark-down; such mark-up must be regarded and treated in all cases as opposite to mark-downs.

With respect to mark-downs, these will be recognized where the procedure is proper and consistent. The procedure with regard to mark-downs will be deemed proper if in any fiscal year or period of that year the goods so marked down are in proportion to current sales, to stock on hand, to mark-downs of corresponding months of the preceding year, or if evidence can be submitted as to market changes which have forced a reduction in retail prices to bring about a parity with the selling price of the same goods which have been purchased at a reduced cost. Arbitrary mark-downs made to provide for depreciation and obsolescence of goods in inventory will not be recognized. Mark-downs made for this purpose will be allowed only by actual offering of the goods to the public at such reduced prices. In this connection see Article 1582 of Regulations 62.

It is recognized that where, in changing from the cost method of computing inventories to the retail method, the opening inventory is not computed at retail, a book profit results for the year in which the change is made which is clearly not income realized from operations, or gain within the meaning of the Revenue Acts and which need not, therefore, be included in the income for the year, provided the taxpayer has kept accurate records showing such unrealized income and in filing the return the items are clearly set up in a rider attached to the return.

D. H. BLAIR
Commissioner

TREASURY DEPARTMENT

OFFICE OF COMMISSIONER OF INTERNAL REVENUE
WASHINGTON, D. C.

Income Tax Mimeograph

February 6, 1924

Coll. No. 3180

R. A. No. 287

Inventories of Retail Dry-Goods Dealers

TO COLLECTORS OF INTERNAL REVENUE,
INTERNAL REVENUE AGENTS IN CHARGE,
AND OTHERS CONCERNED:

Retail dry-goods dealers who desire to change the basis of pricing inventories from the "cost" or "cost or market" method to the "retail method" as described in Article 1588, Regulations 62, and Income Tax Mimeograph 3077, may do so without obtaining formal permission from the Department, provided the books of account are kept by such dealers on the basis of the retail method as prescribed for each taxable period affected.

D. H. BLAIR
Commissioner

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